DOCUMENT RESUME

ED 273 060 EC 190 255

TITLE Meadow-Kendall Social-Emtoional Assessment Inventories for Deaf and Hearing-Impaired Students. The Revised SEAI Manual. Forms for School-Age and Preschool Children.

INSTITUTION Gallaudet Coll., Washington, D.C. Pre-College Programs.

PUB DATE 83

NOTE 41p.; For the original manual, see ED 225 330. Some charts may not reproduce clearly.

AVAILABLE FROM OUTREACH, Pre-College Programs, Box 114, Gallaudet College, Washington, DC 20002 (PM-0293, $11.00).

PUB TYPE Reports - Descriptive (141) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS *Affective Measures; *Behavior Rating Scales; *Deafness; Elementary Secondary Education; Emotional Development; *Hearing Impairments; Interpersonal Competence; *Personality Measures; Preschool Education; Scoring; Self Concept; Social Development; *Test Construction; Test Manuals; Test Norms

IDENTIFIERS *Meadow Kendall Social Emotional Assessment Invent

ABSTRACT

The Meadow-Kendall Social-Emotional Assessment Inventories for Deaf and Hearing Impaired Students (SEAI) are designed to be completed by teachers and other educational personnel in close contact with deaf students. The school-age inventory contains 59 items divided into three subscales: social adjustment, self-image, and emotional adjustment. Norms are provided for girls and for boys ages 7 to 15 and ages 16 to 21. Those norms are based on inventories collected on more than 2400 students enrolled in 10 different schools and programs for the hearing impaired. The preschool inventory contains 49 items divided into four subscales (sociable, communicative behaviors; impulsive, dominating behaviors; developmental lags; and anxious, compulsive behaviors) plus three special items related to deafness. Norms are provided for girls and boys ages 36 to 47 months, 48 to 59 months, and 60 to 83 months. Those norms are based on data collected on approximately 800 children enrolled in special programs for hearing impaired children. This manual describes the rationale for each of the inventories, particularly with reference to the assessment provision of Public Law 94-142, the development of items included, collection of data, and statistical analyses. Procedures are described for administering, scoring, and interpreting the inventories, with a cautionary postscript outlining the uses and limitations of the instruments. (Author)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED273060

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

MANUAL

Meadow-Kendall Social-Emotional Assessment Inventories For Deaf and Hearing-Impaired Students

Research Institute
Kendall Demonstration Elementary School
Gallaudet College

The Revised SEAI Manual

Forms for School-Age and Preschool Children
1983

EC190255

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Leonard Goldberg

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

The Meadow-Kendall Social-Emotional Assessment Inventories for Deaf and Hearing Impaired Students (SEAI) are designed to be completed by teachers and other educational personnel in close contact with deaf students. The school-age inventory contains 59 items divided into three subscales: social adjustment, self image, and emotional adjustment. Norms are provided for girls and for boys ages seven to 15 and ages 16 to 21. Those norms are based on inventories collected on more than 2400 students enrolled in 10 different schools and programs for the hearing impaired.

The preschool inventory contains 49 items divided into four subscales (sociable, communicative behaviors; impulsive, dominating behaviors; developmental lags; and anxious, compulsive behaviors) plus three special items related to deafness. Norms are provided for girls and for boys ages 36 to 47 months, 48 to 59 months, and 60 to 83 months. Those norms are based on data collected on approximately 800 children enrolled in special programs for hearing impaired children.

This manual describes the rationale for each of the inventories, particularly with reference to the assessment provision of Public Law 94-142, the development of items included, collection of data, and statistical analyses. Procedures are described for administering, scoring, and interpreting the inventories, with a cautionary postscript outlining the uses and limitations of the instruments.

Revised Manual
Meadow-Kendall Social-Emotional Assessment Inventory (SEAI)
for Deaf and Hearing-Impaired Students

by
Kathryn P. Meadow
Center for Studies in Education and Human Development

School-age form developed in collaboration with

Michael A. Karchmer
Office of
Demographic Studies

Linda M. Petersen
Office of
Demographic Studies

Lawrence Rudner
Educational Research
Laboratory

Preschool form developed in collaboration with

Pamela Getson

Chi K. Lee

Linda Stamper

Center for Studies in Education and Human Development

Pre-College Programs Gallaudet Research Institute
Gallaudet College
Washington, D.C.

Copyright 1983
Pre-College Programs
Gallaudet College

All rights reserved.

To obtain additional information and copies, write:

OUTREACH
Pre-College Programs
Box 114
Gallaudet College
Washington, DC 20002

Gallaudet College is an equal opportunity employer. The College admits students of any sex, age, religion, race, color, national and ethnic origin to all the rights, privileges, programs and activities generally accorded or made available to all students who qualify for admission to the College. It does not discriminate on the basis of sex, age, religion, race, color, national and ethnic origin in administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other school-administered programs. Programs and services offered by Gallaudet College receive substantial financial support from the US Department of Education.

CONTENTS

Introduction 2
Theoretical Rationale for the Social-Emotional Assessment Inventories for Deaf and Hearing Impaired Children 3
Development of the School-Age Inventory 3
Construction of Items in the School-Age Inventory, 3
Collection of Data for School-Age Inventory Development, 3
Data Processing, Scale Construction, and Statistical Procedures, 6
Establishment of School-Age Norms, 6
Reliability and Validity of the School-Age Inventory 7
Data from the Seattle PATHS Project, 8
Data from SEAI Scores of Deaf Adolescents, 8
SEAI Scores for Deaf Students with Additional Handicaps, 9
Development of the Preschool Inventory 10
Construction of Preschool Inventory Items, 10
Collection of Normative Data for the Preschool Inventory, 10
Description of Children in Preschool Normative Group, 11
Data Processing, Scale Construction, and Statistical Procedures, 11
Establishment of Preschool Norms, 14
Reliability and Validity of the Preschool Inventory 16
Completing the School-Age and Preschool SEAI: Suggestions for Teachers and Other School Personnel 17
Scoring the School-Age Inventory 18
Scoring the Preschool Inventory 19
Use of the Social-Emotional Assessment Inventory:
A Cautionary Postscript 20
Sample Preschool Inventory
Sample School-Age Inventory
References 31

LIST OF TABLES

Table		Page
1.	School-Age Inventory Items (Research Edition)	4
2.	Scores on SEAI Scales by Sex and Age	6
3.	Sociometric Status: Correlations with SEAI Evaluations	7
4.	Inter-Rater Reliability	7
5.	Test-Retest Reliability	7
6.	Correlations from Seattle PATHS Project	8
7.	Correlations between SEAI Scores Completed by Academic Advisors and Dorm Counselors	8
8.	Correlations between SEAI Scores Completed by Fathers and Mothers	8
9.	Correlations between Self Image Scores	9
10.	SEAI Scores by Additional Handicaps	9
11.	Programs Participating in Preschool Inventory Data Collection	10
12.	Description of Children in Preschool Normative Group	11
13.	Preschool Inventory Items (Research Edition)	12
14.	Preschool Inventory Scores by Sex and Age	15
15.	Correlations between Teachers' Scale Ratings	16
16.	Correlations between Ratings of Teachers and Teachers' Aides	16
17.	Correlations between Teachers' Assessments and Scores	17
18.	Norms for Ages 7–15, School-Age Inventory	25
19.	Norms for Ages 16–21, School-Age Inventory	25
20.	Norms for Preschool Inventory	30

PREFACE

A great many professionals who are involved in the education or the provision of mental health services for deaf children have participated in the various stages of development of these inventories. We would like to thank everyone who has contributed and to make a special point of noting the generosity with which requests for time have been met by dedicated and busy people in these fields.

The teachers, administrators, and support service professionals at the Kendall Demonstration Elementary School have been involved in every revision of the inventories. Their thoughtful and productive approach to the problems and possibilities of the instruments was of great benefit. The leadership of Dr. Robert Davila and Carl Kirchner was evident in the initial support received for the project. In addition, Drs. Michael Deninger, Doin Hicks, Donald Moores, and Raymond Trybus were supportive of additional work to produce the preschool form.

More than 135 professionals from across the United States responded to requests for input about items for the research edition of the inventories. Their extensive comments and their responses to questionnaires about the format were incorporated in the final versions.

Ten schools and programs for deaf children participated in the data collection process that led to development of norms for the school-age inventory. More than 50 programs participated in the preschool inventory project. Some of those schools wished to remain anonymous, so we have decided to keep the identities of all participating schools confidential. However, we would like to thank all the teachers who completed almost 3300 inventories at one stage of the development process.

Karen Dean helped to coordinate the data processing effort. Drs. Mark Greenberg, Audrey Simmon-Martin, McCay Vernon, and Frank Ziezuela contributed valuable suggestions on content. Alan Biddle contributed greatly to the format of the first edition of the school-age inventory and manual; Mary Abrams and Judy LeNard were helpful in this revision.

INTRODUCTION

The impetus for the development of the Social-Emotional Assessment Inventory (SEAI) for Deaf and Hearing Impaired Students* was the need of the Kendall Demonstration Elementary School at Gallaudet College to comply with the regulations of the Education for All Handicapped Children Act of 1975, or Public Law 94-142 (Federal Register, 1977). Among the broad and far-reaching requirements mandated by the Act was the development of an individualized educational plan for every handicapped child in the United States. This individualized educational plan was to be based on an assessment of the child's current status in every area of development which might be of importance to educational placement and programming.

Section 121a.532 of the Act states that "the child is assessed in all areas related to the suspected disability, including, where appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities" (Federal Register, 1977: 42497). The law has required that tests be non-discriminatory, either racially or culturally, that tests be validated for the specific purpose for which they are used, be used for the specific purpose recognized by the producer, and be provided in the child's native language or mode of communication.

The requirement that assessment instruments be validated for the specific purpose for which they are to be used poses special problems for those who work with hearing impaired children, because few assessment instruments have been standardized with these students. However, in preparing for the initial assessments of Kendall students in compliance with P.L. 94-142, it was decided to experiment with an existing instrument designed to measure the behavior of a general population of school children, with the idea of adapting and then norming that instrument to meet the current need.

It was believed that the instrument selected should contain, to the extent possible, items based on directly observable behaviors, rather than on indirect inferences made by an adult in the child's environment. The instrument should be designed to be completed by classroom teachers. This criterion was established for two reasons. First, most schools for deaf children either have no school psychologist available for direct testing, or the psychologist is kept more than busy completing necessary tests of intelligence and educational achievement (among others). Second, classroom teachers are the people within the school system who have the greatest opportunity to observe students' behaviors over time and in a variety of situations. This means that their assessments should be both valid and reliable, assuming that they are asked to assess relevant dimensions of behavior. The ability of classroom teachers to make valid judgments about the behavioral and emotional status of their students has been demonstrated by a number of research studies (Bower, 1958; Maes, 1966) as well as by the observations of mental health consultants in school settings (Berlin, 1967; Schlesinger & Meadow, 1972).

A variety of instruments was considered for use with the Kendall students. (See Meadow & Trybus, 1979, for a review of various approaches and instruments used in the evaluation of behavioral and emotional problems of deaf children.) The instrument eventually selected for use in developing the first Individualized Educational Programs (IEPs) for Kendall students, in the area of social and emotional development, was the School Behavior Check List (Miller, 1972). This checklist had been standardized on a population of 5000 hearing children, and separate norms were available for both boys and girls, within the age groups of three to six and seven to 13. Goulder and Trybus (1977) had reported on the use of the School Behavior Check List (SBCL) with 148 hearing impaired children in three state residential schools for the deaf, with some item analyses of the checklist.

In the spring of 1977, Kendall teachers and supervisors were asked to complete the SBCL for each student. These ratings were used in developing the IEPs for that school year. After school personnel had used the SBCL for assessing students in their classes, they were asked to assess the usefulness of the SBCL for this particular population. While about 40 percent felt that the instrument was usable with deaf students, the remainder had reservations about it. Their comments detailed the items they felt were inappropriate, as well as items specific to deafness, which were not included. Those comments seemed a convincing rationale for attempting to design an instrument especially for hearing impaired students.

After the publication of the initial inventory for students ages 7 to 21 (Meadow, Karchmer, Petersen, Rudner, 1980), numerous requests were received from those working with preschool hearing-impaired children, asking for a separate form for the younger age group. This work was begun in 1981.

*The terms "deaf" and "hearing impaired" are used interchangeably throughout this manual. The inventories were designed to be useful for children with a wide range of hearing loss, from mild to profound, in a variety of special educational settings and programs.

THEORETICAL RATIONALE FOR THE SOCIAL-EMOTIONAL ASSESSMENT INVENTORIES

In developing items for the school-age SEAI, a number of theoretical and practical considerations were taken into account. The instrument should reflect positive classroom and school behaviors, and not be aimed exclusively at "problem" or "pathological" behaviors. The instrument should contain enough items to make reliable subscales a reasonable expectation, but not so many as to make it overly burdensome for teachers to complete.

A theoretical framework for the inventory was based on ideas that had been developed over a period of years (Meadow, 1967; 1975; 1976; 1980) and drew on the research and clinical work of many individuals who had been involved with the mental health problems and the development of deaf persons (e.g., Rainer, Altshuler & Kallmann, 1969; Levine, 1956; Mindel & Vernon, 1971). Much of the theory was related to work done in collaboration with H. Schlesinger at the University of California, San Francisco (Meadow & Schlesinger, 1976; Schlesinger & Meadow, 1972).

Basic notions include four major propositions: (a) there is nothing inherent in the condition of deafness that leads inevitably to differences in the social and emotional development of deaf and hearing persons; (b) however, deaf persons generally share a number of important experiences that may lead to differing patterns of social and emotional adjustment; (c) chief among these patterns is the relative language deprivation, often related to deafness, which leads in turn to attenuated communication possibilities; and (d) an additional factor in the adjustment of deaf persons is the acceptance (or lack of acceptance) of the deaf individual by significant others in the environment. Thus, it might be expected that some hearing-impaired children may have negative feelings about themselves that would be evinced by embarrassment around the visible signs of their handicap: hearing aids, sign language, poor speech.

Many of the life experiences of deaf children might contribute to habits or traits that could be described as "immaturity." Among those experiences might be the overprotective atmosphere of many homes and schools. Decreased opportunities to discuss feelings and to be responsible for others may lead to a deficiency in empathy. Overindulgence by parents with normal hearing may lead to behavior characterized as egocentric. These are examples of how theoretical notions were translated into possible inventory items.

DEVELOPMENT OF THE SCHOOL-AGE INVENTORY

Construction of Items in the School-Age Inventory

Based on the theoretical framework described in the preceding section, four target categories were established that were expected eventually to be separate scales: (a) sociability and interpersonal relationships; (b) individual or personal characteristics; (c) self-esteem or identity; and (d) maturity, responsibility, independence. Between 12 and 15 items were collected or written for each category. They were fairly evenly divided between positive and negative statements of observable behaviors.

A total of 52 items was circulated to teachers and support specialists (audiologists, counselors, social workers, etc.) at the Kendall Demonstration Elementary School for comments and suggestions. Revisions and additions were made on the basis of that feedback and a second draft containing 57 items was developed. This second draft was mailed to a large group of professionals who were knowledgeable about deaf children. A brief questionnaire designed to elicit reactions to format as well as content accompanied the inventory. A total of 83 responses to this request was received, including responses from 22 educational administrators, five faculty members from teacher training programs, 28 mental health professionals, 25 classroom teachers, and three researchers. If the 30 Kendall teachers who responded to the first draft of the inventory are added to this total, it can be said that more than 100 professionals associated with deaf children contributed to the development of the items contained in the final version. Each suggestion and comment was carefully considered, and items were again revised. This third and final revision resulted in a "Research Edition" of the school-age inventory, containing 69 items (see Table 1).

With so many revisions and reworkings, it is difficult to know the original source of the final items with certainty. However, a rough reconstruction of the process indicates that the 59 items appearing in the final school-age form came originally from six primary sources.

Twenty of these items were adopted (with language changes, in many instances) from a rating scale used previously to collect data from teachers of deaf students (Meadow, 1967; Schlesinger & Meadow, 1972, chapter 6). Thirteen items were written as the direct result of suggestions from teachers at the Kendall Demonstration Elementary School. Six were the result of suggestions of persons working in the field who reviewed the first research edition of the inventory. Four were suggested by items of behavior enumerated on a response form used in a mental health survey of school children in Los Angeles County (State of California, 1960; Schlesinger & Meadow, 1972, chapter 7). Two were suggested by items included in the School Behavior Check List (Miller, 1972). Five items were written on the basis of psychological theory developed in working with deaf individuals. Nine items were based on self image theory directly related to observations in schools for deaf students.

Collection of Data for School-Age Inventory Development

In the spring of 1978, the process of contacting schools

Table 1
School-Age Inventory Items (Research Edition) with Varimax Rotated Factor Matrix

Item		Factor I	Factor II	Factor III
1.	Relates well to peers and is accepted by them	.407	.500	.234
2.	Displays twitches, mannerisms, tics of face or body	.224	.186	.469
3.	Distinguishes between fact and fiction, real and imaginary events and/or people (e.g., understands that "Superman" does not really exist)	.260	.369	.329
4.	Denies own misbehavior (may also blame others for own misdeeds)	.696	.076	.158
5.	Takes pride in physical appearance/personal attractiveness: feels at least moderately pretty or handsome	.282	.403	.221
6.	Isolated. Has few or no friends. May be considered "withdrawn"	.148	.506	.400
7.	Shows initiative in completion of assignments; motivated to finish work	.450	.505	.087
8.	Aggressive. Behavior may include fighting, scratching, biting other students and/or kicking or hitting animals	.701	-.006	.196
9.	Has generally acceptable emotional responses. Rages (tantrums) or violent outbursts occur only after extreme provocation if at all	.474	.201	.215
10.	Demonstrates negative feelings about physical size and/or strength	.236	.221	.532
11.	Accepts some delay of gratification. (Does not expect instant satisfaction of every need, whim or desire)	.506	.293	.280
12.*	Lacks concern for safety of self and others. Fails to take age-appropriate precautions with fire, electrical appliances, tools	—	—	—
13.	Tries to communicate with others (both deaf and hearing) by any means necessary: (signs), speech, writing, pantomime	.055	.583	.101
14.	Teases or annoys or pesters other students	.717	-.011	.184
15.	Takes responsibility for fair share of tasks (e.g., helps to clean up after a project is finished)	.554	.385	.134
16.	Engages in behavior considered by most teachers and students to be bizarre or strange (e.g., talking or signing to self, rocking, staring at lights for long periods, twirling)	.342	.243	.499
17.	Performs cooperatively in group of peers. Contributes to cohesion rather than conflict	.676	.399	.166
18.	Has many fears. Overly and unrealistically concerned with danger, storms, injury, death	.164	.189	.670
19.	Self-reliant. Not overly dependent on others for help	.298	.497	.289
20.	Gives up quickly. Expects to fail	.387	.416	.368
21.	Happy, cheerful, pleasant, easy-going	.517	.453	.197
22.	Engages in destructive behavior (e.g., breaking objects, defacing walls or furniture, scattering things in disarray)	.812	.098	.345
23.	Identifies with (e.g., shows excited recognition of) a stranger or visitor who wears a hearing aid	.005	.417	-.036
24.	Lacks competence with tools, utensils or equipment even though there is no apparent physical basis for lack of skill	.198	.300	.538
25.	Relates well to adults (both men and women)	.443	.593	.154
26.	Insists on repetition of usual routines. Changes in schedules, habits, route arrangements elicit extreme (negative) responses	.266	.215	.486
27.	Trustworthy, dependable, reliable	.697	.409	.131
28.	Misbehavior not deterred by restrictions or by threat of punishment	.608	.080	.167
29.	Creative. Shows imagination in school work or in leisure/play activities	.191	.630	.112
30.	Fails to accept criticism, especially if it is expressed as discipline or restriction	.662	.137	.231
31.*	Behavior reflects knowledge and acceptance of sexual identity (Girls content to be female; boys content to be male)	—	—	—
32.*	Shy. Bashful. Hesitates to interact with others	—	—	—
33.	Lethargic. Lacks energy. Always tired	.057	.412	.409

34.*	Preoccupied with sex-related issues	—	—	—
35.	Shows excited, positive response to stranger who is using signs	-.011	.425	-.003
36.	Demands attention. Must be the center of everything. (May insist on being first in line, or leader, or captain)	.651	-.137	.282
37.	Tries to understand the communication of others by any means offered: listening, lipreading, signing, writing, gestures	.158	.606	.125
38.	Overly concerned with cleanliness. (May wash hands constantly or be unable to tolerate specks of dust or dirt)	.073	.003	.527
39.	Seems to understand the feelings of others; demonstrates empathy	.586	.449	.112
40.*	Pretends to understand the remarks of others even when he/she comprehends nothing	—	—	—
41.	Curious. Eager to learn new things. Likes new experiences	.211	.686	.118
42.	Daydreams. Tunes out events in immediate environment	.251	.402	.386
43.	Participates in classroom or group activities; volunteers answers, offers opinions in discussions	.190	.702	.143
44.	Responds poorly to losing in games or failing to achieve in class	.626	.077	.288
45.	Other students look to this student as a leader	.096	.563	.137
46.	Shows great concern or preoccupation with minute details (e.g., may insist on perfection in writing or drawing)	.032	-.110	.414
47.	Demonstrates a sense of humor or wit (e.g., can appreciate funny situations or jokes at own expense)	.236	.560	.245
48.*	Avoids wearing hearing aid at school and/or on field trips	—	—	—
49.	Participates well in organized play or games (takes role of leader or follower; plays to completion; follows rules)	.467	.477	.234
50.	Complains of physical ailments that have no apparent medical basis (e.g., headaches, stomach aches, etc.)	.247	.139	.527
51.	Is willing to interact with hearing people (i.e., does not refuse to interact with peers or adults who have normal hearing)	.154	.528	.189
52.	Anxious. Nervous. Worries about many commonplace events	.186	.228	.569
53.	Accepts differences in other people; doesn't tease or exclude peers on basis of racial differences or physical handicaps	.577	.269	.149
54.	Has habits, mannerisms or traits considered to be rude or socially unacceptable (e.g., picks nose, makes obscene/sexual references)	.537	.179	.366
55.	Demonstrates acceptance/pride in own social group membership (i.e., racial, ethnic, linguistic, religious identity)	.287	.517	.276
56.	Demonstrates negative attitudes toward sign language (refuses to sign, pretends not to understand others' signing)	.185	.234	.420
57.*	Follows basic rules of neatness and personal hygiene	—	—	—
58.	Demonstrates negative feelings about own motor skills, dexterity, or visible handicaps	.176	.242	.611
59.	Doesn't try to copy classmates' work nor take things belonging to others	.537	.269	.155
60.	Generous. Shares with others	.569	.404	.093
61.	Has many accidents or mishaps resulting in breakage of objects or injuries requiring first aid	.351	.099	.534
62.	Demands attention and help constantly. Takes disproportionate share of teachers' time	.490	.140	.394
63.*	Won't stand up for self. Lets others take advantage of him/her	—	—	—
64.*	Restless. Never sits still	—	—	—
65.	Acts without thinking. Impulsive. Doesn't consider or doesn't care about consequences	.693	.127	.268
66.	Obeys the rules; follows instructions or requests from adults in authority	.730	.253	.079
67.	Avoids communicating through speech. Seems embarrassed to use voice	.004	.292	.165
68.*	Demonstrates age-appropriate knowledge about human reproductive functions and/or body parts	—	—	—
69.	Kind and considerate	.735	.341	.059

*Items eliminated from the final inventory

and programs for deaf children began for the purpose of seeking cooperation in the collection of data for further development of the inventory. Efforts were made to secure the participation of schools in a variety of geographical areas, including both day and residential programs. Some of the participating schools requested that their identities remain confidential. It was therefore decided not to reveal the names of any specific schools.

Of the 2365 completed research edition inventories received, 1793 were from residential schools and 572 were from day programs. In terms of geographical region, 367 were from the Northeastern United States, 346 from the North Central, 893 from the South, and 759 from the Southwest.

In addition to teachers' evaluations of students on the 69 items of the inventory, information on students' birthdates and sex was also requested.

Data Processing, Scale Construction, Statistical Procedures*

Inventories were coded and information entered in a computer file. On the basis of preliminary analyses, 10 items were eliminated from the pool of 69. These eliminated items included Items 12, 31, 32, 34, 40, 48, 57, 63, 64, 68. (For wording of these items, consult Table 1; the items eliminated from the final inventory are marked with an asterisk.)

Items were eliminated for any one of three reasons: (a) 20 percent or more of the teacher raters could not evaluate a student on the item, either because it "did not apply" or because they did not have enough opportunities to observe that particular student in relevant situations; (b) the item did not differentiate sufficiently between groups of students, e.g., 75 percent of the students received the same rating (T or F) on an item; and (c) the item did not have a sufficiently high loading on any of the three factors or scales.

It is of some interest that all three of the items with some relationship to sexual (gender) identity or information were eliminated because of an insufficient number of responses from raters. One graduate student who used the research edition of the inventory as one instrument in her dissertation research was asked to eliminate one of these items from the pool before her proposal was approved by the local school districts. Mental health professionals may find these reflections of sensitivity somewhat surprising.

Three factors were generated by the factor analysis, and inspection by the investigators confirmed a face validity. These three emergent factors or scales were labeled as follows: Scale 1, Social Adjustment; Scale 2, Self Image; Scale 3, Emotional Adjustment. The inter-item reliabilities of the three scales (Cronbach's alpha) are Scale 1 = .96, Scale 2 = .94, Scale 3 = .91.

Establishment of School-Age Norms

The next procedure involved the computation of mean scores for each scale for every student included in the population base, with the following exceptions. Students younger than seven years of age were excluded because only 34 inventories were returned for children in that age group. Also excluded were students whose teachers did not complete at least 80 percent of the items for that scale. Further cases were eliminated where information on either sex or age was not available. Using these criteria, 2071 cases (88 percent) were available for establishing norms for Scale 1 (Social Adjustment); 1757 cases (74 percent) were available for establishing norms for Scale 2 (Self Image); and 2042 cases (86 percent) were available for establishing norms for Scale 3 (Emotional Adjustment).

In order to determine the desirability of providing separate norm distributions for sex and/or age groups, three-way analyses of variance were performed for each of the three scales. The three factors were sex (girls vs. boys); type of educational program (day vs. residential); and age group (ages seven to nine vs. 10 to 12 vs. 13 to 15 vs. 16 to 18 vs. 19 to 21).

Significant differences between age levels were found for all three scales; significant differences between girls and boys were found for Scale 1 (Social Adjustment) and for Scale 2 (Self Image) but not for Scale 3 (Emotional Adjustment). No significant differences were found for school setting (day vs. residential).

On Scale 1 (Social Adjustment), the girls as a group

Table 2
Scores on School-Age by Sex and Age

Scale 1: Social Adjustment

	Mean	s.d.	(N)
Boys, Ages 7-15	2.85	.50	(692)
Girls, Ages 7-15	3.02	.51	(540)
Boys, Ages 16-21	2.96	.54	(444)
Girls, Ages 16-21	3.12	.46	(395)

Scale 2: Self Image

	Mean	s.d.	(N)
Boys, Ages 7-15	3.04	.45	(605)
Girls, Ages 7-15	3.10	.48	(477)
Boys, Ages 16-21	2.97	.48	(358)
Girls, Ages 16-21	3.06	.44	(317)

Scale 3: Emotional Adjustment

	Mean	s.d.	(N)
Boys and Girls, Ages 7-15	3.25	.45	(1231)
Boys and Girls, Ages 16-21	3.31	.44	(811)

*Data processing was coordinated by Linda Petersen, Office of Demographic Studies, Gallaudet College, with the assistance of Karen Dean, Educational Research Laboratory, Gallaudet College. Statistical procedures and general technical assistance were provided by Dr. Lawrence Rudner, formerly of Gallaudet's Educational Research Laboratory. Dr. Michael Karchmer, Center for Assessment and Demographic Studies, participated in lengthy discussions leading to decisions made at various stages of the developmental work.

were rated higher than the boys, F (1,2051) = 56.57, $p \leq .001$; and the older groups of students tended to score higher on this scale compared to the younger groups, F (4,2051) $\leq$ 7.09, $p \leq .001$. On Scale 2 (Self Image), girls were seen as demonstrating more positive self images than boys, F (1,1737) = 11.38, $p = .001$; and younger students were seen as demonstrating more positive self images than older students, F (4,1737) = 3.22, $p = .01$. For both Scale 1 and Scale 2, the significant age break grouped the seven to 15 year olds together and the 16 to 21 year olds together.

Table 2 shows mean scores (1 = "low" and 4 = "high"), standard deviations, and numbers of cases for each of the three scales, by sex and age groupings.

Age and sex did not interact for any of the three scales, nor were any significant three-way interactions found. The only significant interaction was between school setting and age, on Scale 3, F (4,2014) = 3.49, $p \geq .01$. Scale 3 also showed significant main effects for age. Scores tended to be progressively more positive across five three-year age groups (spanning ages seven to 21), F (4,2014) = 3.22, $p \leq .01$.

Based on the analyses, it was apparent that separate norms should be provided for younger girls, younger boys, older girls, and older boys for Scales 1 and 2. For Scale 3, separate norms are needed for (a) younger boys and girls and (b) older boys and girls. These norms are shown, expressed in deciles, in Tables 18 and 19, page 28.

RELIABILITY AND VALIDITY OF THE SCHOOL-AGE INVENTORY

Since the initial publication of the school-age inventory in 1980, additional data have been collected for the instrument. (Readers may also want to review some of the published commentaries which have appeared: Levine, 1981; Ziezuela, 1982.)

A small study of one classroom was conducted, related to an experimental technique for affective education (Meadow & Larabee, 1982; Meadow, 1981). The classroom teacher completed SEAI evaluations for her six students in March 1980 and again in June. The school counselor also completed inventories in June. Sociometric status scores were compiled, based on 23 observations of students during a session that required each student to choose another for a turn with the game activity.* (Low sociometric status scores reflect high status.)

The three boys and three girls in the class had a mean age of 8.5 years, and a mean hearing loss of 81 dB (speech range, better ear). Table 3 shows correlations of sociometric status scores with the SEAI scale scores derived from the teacher's and the counselor's ratings.

The teacher's ratings correlate very highly with sociometric scores (−.75, −.92, −.91); the counselor's ratings are less strongly related (−.72, −.67, −.60). Since the classroom teacher had much more lengthy and sustained opportunities to observe the children, this difference might have been expected. Given the small number of children involved, the counselor's correlations are not unrespectable. This small set of data is seen as a suggestion of some degree of validity for the SEAI: teacher and counselor view as socially and emotionally well adjusted those children who are more likely to be chosen by their classmates.

Table 3
Sociometric Status: Correlations with Meadow/Kendall SEAI Evaluations by Classroom Teacher and by School Counselor
(Pearson r) (N = 6)

	Sociometric Status
Classroom teacher	
Social adjustment	(Scale 1) -.75*
Self-image	(Scale 2) -.92**
Emotional adjustment	(Scale 3) -.91**
School counselor	
Social adjustment	(Scale 1) -.72*
Self-image	(Scale 2) -.67 +
Emotional adjustment	(Scale 3) -.60

+$p \leq .10$ *$p \leq .05$ **$p \leq .01$

Table 4 shows the relationship between the teacher's and the counselor's ratings of the children in June (inter-rater reliability). They range from a high of .93 for social adjustment (Scale 1) to a low of .58 for emotional adjustment (Scale 3). Scale 2 (self image) had an intermediate correlation of .66.

Table 4
Inter-rater Reliability
Correlations of SEAI scores from Classroom Teacher and Counselor (June, 1980) (N = 6)

Scale 1	.93**
Scale 2	.66 +
Scale 3	.58

+$p \leq .10$ **$p \leq .01$

Table 5 shows the correlations between the class-

Table 5
Test-Retest Reliability: Correlations of Classroom Teacher's SEAI scores: March, 1980 and June, 1980 (N = 6)

Scale 1	.80*
Scale 2	.86**
Scale 3	.79*

*$p \leq .05$ **$p \leq .01$

*Others involved in the collection and coding of these data were Gail Larabee, Ingrid Willencz-Isaacs, Emily Smith, and Maureen Kiely.

room teacher's ratings of the six children in March and in June (test-retest reliability). They range from a high of .86 for Scale 2, to .80 for Scale 1, to .79 for Scale 3. Again, these are fairly high correlations considering the small number of children involved.

Data from the Seattle PATHS* Project

Greenberg (1983) has developed a social skills curriculum for deaf children. In connection with the field testing and evaluation of this program in the Seattle schools, he has collected a wide variety of data from children participating in the program, their parents, and their teachers. One instrument used is the SEAI. Two other measures related to adjustment were completed by teachers: the Walker Problem Behavior Identification Checklist (Walker, 1976) and the Health Resources Inventory (Gesten, 1976). Two relevant measures were completed by parents: the Child Behavior Inventory (Eyberg & Ross. 1978; Robinson, Eyberg, & Ross, 1980) and the Child Behavior Checklist (Achenbach & Edelbrock, 1981). Table 6 shows correlation of those measures with the three SEAI scales, based on 61 children participating in the Seattle project.

As Table 6 shows, correlations between the SEAI and the two other teacher evaluations are quite high (from .54 to .78), while the SEAI correlations with parent evaluations are moderate to low (from .06 to .38). (Negative correlations reflect opposite scoring systems for positive and negative evaluations.)

Data from SEAI Scores of Deaf Adolescents

In collaboration with personnel at the Model Secondary School for the Deaf (Gallaudet College), data were collected from and about new students entering the school in September 1981. (Richard Lytle coordinated the data collection effort.) Social-emotional adjustment inventories were collected from academic advisors, dormitory counselors, and parents. The 81 new students had a mean age of 16.1 years, a mean hearing loss of 95dB (speech range, better ear). They were about evenly divided between boys and girls, and 30 percent had transferred from other residential schools.

Table 7 shows the correlations between SEAI scores from academic advisors and those from dormitory counselors. These were modest ($r = .45, .50, .33$), but quite significant ($p \leq .001$). Table 8 shows that mothers and fathers who rated the same 49 students agreed on Scale 1 ($r = .74$), with lesser agreement on Scales 2 and 3 ($r = .46$ and $.37$), although all correlations were significant ($p \leq .01$).

Table 7
Correlations between SEAI scores completed by (1) Academic Advisors and (2) Dorm Counselors (N = 81)

Scale 1	.45***
Scale 2	.50***
Scale 3	.33***

***$p \leq .001$

Table 8
Correlations between SEAI scores completed by (1) Fathers and (2) Mothers (N = 49)

Scale 1	.74**
Scale 2	.46**
Scale 3	.37**

**$p \leq .01$

Additional data were collected from the students themselves, using a pictorial inventory of self image designed specifically for deaf students (Meadow, 1969). Those scores had a modest correlation with SEAI self image scores ($r = .20$ for academic advisors;

Table 6
Correlations of School-Age Scores with Scores from Four Other Instruments: Data from Seattle PATHS Project (N = 61)

	Social Adjustment	Self Image	Emotional Adjustment
Health Resources Inventory	.70***	.78***	.53***
Problem Behavior Identification Checklist (Walker)	.70***	.67***	.54***
Eyberg Behavior Inventory	.20	.22*	.06
Achenbach (Internalizing)	.37**	.28*	.23*
(Externalizing)	.39***	.38***	.36**

*Providing Alternative THinking Strategies.

r = .28 for dormitory counselors). See Table 9.

Table 9
Correlations between SEAI self-image score (Scale 2) from Academic Advisors and Dorm Counselors and Students' Scores on Meadow/Kendall Pictorial Self-Image Test (N = 81)

Academic Advisors	.20*
Dorm Counselors	.28*

*$p \leq .05$

SEAI Scores for Deaf Students with Additional Handicaps

By matching code numbers of the SEAI norming group with the computer file records from the 1978 *Annual Survey of Deaf and Hearing Impaired Children*, additional demographic information can be determined for the SEAI group. (Susan Jablonski of Gallaudet's Center for Studies in Assessment and Demographic Studies matched the data files.) Table 10 shows scores on the three SEAI scales by age and additional handicapping conditions. As might have been predicted, children with additional handicaps were rated significantly below their peers without additional handicaps on all three scales and at both younger and older age levels. The effect of an additional handicap was especially pronounced for Scale 2, self image ($F = 65.78$; $p \leq .001$).

In summarizing the data on reliability and validity of the school-age SEAI, we find variable but positive support for the meaningfulness of the inventory. It is interesting to report that scores of Danish children did not differ significantly from those of American children, either on the three scales or on 27 of the 59 individual items (Meadow & Dyssegaard, in press).

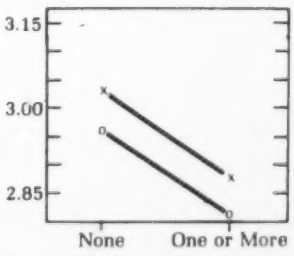
It remains for individuals and school districts to interpret these data and decide for themselves if the SEAI can be a useful addition to their assessment procedures. It is hoped that additional data with larger groups can be made available in the future.

Table 10
School-Age Inventory Scores by Age and Handicaps in Addition to Deafness

A. Social Adjustment

	$\bar{X}$	(N)
Ages 7 - 12		
No Add'l H/C	2.96	(525)
1 or more	2.80	(152)
Ages 13 - 21		
No Add'l H/C	3.03	(948)
1 or more	2.87	(248)

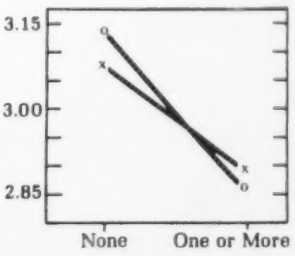
age	$F = 8.07^{**}$
handicaps	$F = 31.94^{***}$
interaction	$F = .02$



B. Self-Image

	$\bar{X}$	(N)
Ages 7 - 12		
No Add'l H/C	3.13	(477)
1 or more	2.86	(129)
Ages 13 - 21		
No Add'l H/C	3.07	(797)
1 or more	2.87	(203)

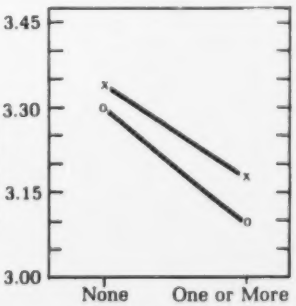
age	$F = 4.87^{*}$
handicaps	$F = 65.78^{***}$
interaction	$F = 1.46$



C. Emotional Adjustment

	$\bar{X}$	(N)
Ages 7 - 12		
No Add'l H/C	3.30	(526)
1 or more	3.10	(152)
Ages 13 - 21		
No Add'l H/C	3.33	(937)
1 or more	3.18	(232)

age	$F = 4.54^{*}$
handicaps	$F = 44.43^{***}$
interaction	$F = .74$



*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

o = ages 7 - 12
x = ages 13 - 21

DEVELOPMENT OF THE PRESCHOOL INVENTORY*

The social-emotional adjustment inventory for hearing-impaired students ages three to six is an extension of the school-age inventory. Like that instrument, it is designed for use by teachers or others who have lengthy and intensive opportunities for observing behaviors of young children with hearing impairments. Again, efforts were made to include items describing actual behaviors, so that few inferences about children's motivations are necessary.

Construction of Preschool Inventory Items

The final inventory contains 49 items, reduced from 70 included in the research edition on which normative data were collected. The inventory for older deaf students served as the base for the preschool instrument. Individual consultations were held with teachers in the preschool department of the Kendall Demonstration Elementary School to discuss the relevance of those items for their students. Some items were modified to increase their appropriateness, some were deleted, others were added. The resulting set of items was sent to a panel of experts in preschool deaf education and the psychology of deafness, with a request for comments and suggestions. Responses were received from 34 professionals with various kinds of training and experience: six preschool teachers, 11 psychologists, three psychiatrists, three audiologists, four social workers or counselors, and seven administrators of preschool programs for deaf children. Based on comments from this group, a revised set of items was developed and sent to a smaller subset of interested persons. The 70 items in the research edition of the inventory resulted from rewriting items in that second draft.

Collection of Normative Data for the Preschool Inventory

With the purpose of recruiting a geographically representative group of preschool programs for the collection of normative data, 10 states from various regions of the United States were selected: Arizona, California, Connecticut, Florida, Michigan, Nebraska, North Carolina, Pennsylvania, Texas, and Washington. The 1981 *Directory of Programs and Services for the Deaf in the United States* (Craig & Craig, 1981) was used to develop a list of programs serving deaf children in the three-to-six age group, each with an enrollment of at least 10 students. (The minimum number of students was increased to 25 for Texas and California.) Using these criteria, a list of 122 educational programs was compiled. Letters were sent to administrators of those programs, requesting their cooperation in the collection of inventories from teachers of children between the ages of 3.0 and 6.11 years. Enclosed with the letters were copies of the inventory and a sheet for the collection of background information on each child. Of

Table 11
Programs Participating in Preschool Inventory Data Collection

State	No. Programs Contacted	No. Programs Participating	No. Students Contributed	Percent Students Contributed
Arizona	6	1	57	6.7 %
California	31	10	120	14.0
Connecticut	7	3	63	7.4
Florida	11	6	56	6.5
Michigan	13	8	65	7.6
Nebraska	4	2	29	3.4
North Carolina	4	3	123	14.4
Pennsylvania	14	5	102	11.9
Texas	26	11	176	20.5
Washington	6	3	20	2.3
Other	2	2	46	5.4
Total	124	54	857	100.1 %

*This section of the manual is adapted from a paper to be published in the *American Annals of the Deaf*.

the 122 programs contacted, 52 (43 percent) agreed to participate and were sent inventories for their students. Two additional programs were also asked to cooperate, making the total number of participating programs 54. Table 11 shows the numbers and proportions of programs and students in each of the 10 states.

cent Hispanic. Twenty-one percent are enrolled in oral-only educational programs and 78 percent in total-communication programs. Sixty percent were deaf at birth. Almost half are classified as having a "profound" hearing loss. Three-quarters have no deaf relatives.

Table 12
Characteristics of Preschool Students in Normative Population

A. Sex			**B. Age**		
Boys	53.5%	(459)	36 - 47 months	19.4%	(166)
Girls	46.5%	(398)	48 - 59 months	29.2%	(250)
			60 - 71 months	26.0%	(223)
			72 - 83 months	25.4%	(218)
C. Ethnic Background			**D. Program Type**		
White	61.7%	(529)	Oral-only	21.0%	(180)
Black	19.5%	(167)	Total communication	77.6%	(665)
Hispanic	13.7%	(117)	Other/NA	1.6%	(12)
Other	4.2%	(36)			
NA	1.0%	(8)			
E. Age at Onset of Deafness			**F. Hearing Level**		
Birth	59.2%	(507)	Mild loss	2.2%	(18)
0 - 2	17.9%	(153)	Moderate	6.3%	(54)
3 + years	1.5%	(13)	Moderately severe	12.4%	(106)
Unknown	19.4%	(166)	Severe	30.9%	(265)
NA	2.1%	(18)	Profound	46.1%	(395)
			NA/unknown	2.2%	(19)

G. Deaf Relatives

None	74.2%	(636)
One or more	23.7%	(203)
NA	2.1%	(18)

Description of Children in Preschool Normative Group

Of the 910 inventories returned by participating programs, 53 were eliminated because the children were younger than three or older than seven years of age. The remaining 857 inventories were analyzed. Characteristics of the children on whom the assessments were based are summarized in Table 12.

Table 12 shows that boys outnumber girls, as is usual in deaf populations; children in the youngest age group (36 to 47 months) are slightly underrepresented; 62 percent are white, 20 percent black, and 14 per-

Data Processing, Scale Construction, and Statistical Procedures

A preliminary analysis of the distribution of responses to the 70 items included in the research edition of the preschool inventory resulted in the elimination of nine from the pool on which the eventual factor analysis was conducted. The items eliminated prior to the factor analysis included the following:

- Interacts well with adult males.
- Gentle with animals, pets.

(Both items could not be rated by 45 percent or more of

Table 13
Preschool Inventory Items (Research Edition) with Varimax Rotated Factor Matrix

Item		Factor I	II	III	IV	DF **
1.	Shows interest/pride in products of school activities (drawings, projects, block structures, etc.)	.538	.237	.315	.039	
2.	Follows instructions or requests from adults	.450	.477	.286	.015	
3.	Forms warm, close attachments to (friendships with) peers	.682	.281	.106	.042	
4.	Wets pants	.074	.072	.786	-.026	
5.*	Interacts well with adult males	—	—	—	—	
6.	Overly aggressive. Behaviors may include fighting, scratching, biting	.057	.730	.015	.084	
7.	Generally unsuccessful in efforts to get approval or acknowledgement from peers	.476	.361	.214	.255	
8.	Hides, loses, forgets or abuses amplification equipment	(.122	.353	.188	.156)	**
9.	Exhibits behaviors considered by most teachers and students to be bizarre or strange (e.g., rocking, staring at lights for long periods, twirling, talking to self in "own world")	.491	.189	.355	.205	
10.	Has generally acceptable emotional responses. Rages, tantrums, or violent outbursts occur only after extreme provocation if at all	.340	.425	.166	.114	
11.	Has age-appropriate attention span	.447	.387	.336	.139	
12.	Very fearful. Overly and unrealistically concerned with danger, storms, dark rooms, injury, death, health, parents' welfare, etc.	.190	.147	.107	.469	
13.	Accepts delay of gratification (Does not expect instant satisfaction of every need, whim, or desire)	.275	.516	.210	.153	
14.	Isolated. Has no friends. Withdrawn	.627	.125	.187	.263	
15.	Awkward or clumsy with tools, equipment, writing/drawing materials	.283	.219	.443	.173	
16.	Avoids eye contact	.530	.310	.246	.258	
17.	Teases or annoys or pesters other children	.094	.742	-.026	.065	
18.	Communicates with children and/or adults by any means at her/his disposal: gesture, sign, vocalization, pantomine, speech, drawing	.669	-.016	.214	.084	
19.*	Cooperates in cleaning up after a project, putting toys away, etc.	—	—	—	—	
20.	Ritualistic. Insists on repetition of usual routines. Changes in routine elicit extreme, negative responses	.211	.323	.213	.436	
21.*	Expresses desire or need for independence in eating, dressing and other daily living skills (would *rather* "do it myself")	—	—	—	—	
22.*	Amuses self. Plays alone with toys, books, household objects	—	—	—	—	
23.*	Applauds (claps hands) in praise of own good behavior/achievements	—	—	—	—	
24.	Happy, cheerful, pleasant	.558	.287	.071	.162	
25.	Overly concerned with cleanliness. (May wash hands or toys constantly or be unable to tolerate specks of dust or dirt)	.084	.085	.028	.453	
26.	Shows great concern or preoccupation with insignificant details (may insist on perfection in writing, drawing, block-play, puzzles)	.056	.186	-.030	.493	
27.*	Gives up quickly. Won't try something more than once or twice	—	—	—	—	
28.	Uses aches, pains, minor injuries to get attention and/or to avoid chores	-.039	.347	-.031	.450	
29.	Engages in destructive behavior (e.g., breaking objects, defacing walls or furniture	.180	.585	.181	.172	
30.	Basically an anxious child. Nervous. Worries about many things	.171	.218	-.007	.581	
31.	Demonstrates negative attitudes toward communication. May refuse to sign or speak, pretends not to understand, closes eyes	.474	.359	.141	.268	
32.	Scolding or punishment does not prevent or stop negative behaviors	.226	.659	.175	.118	
33.	Creative. Shows imagination in painting, blocks, dramatic play, etc.	.430	.192	.324	.054	

34.	Persists in silly, clowning behaviors that annoy other children	.080	.676	.021	.178	
35.*	Lethargic. Lacks energy. Often tired	—	—	—	—	
36.	Unable to accept criticism, especially if expressed as discipline or restriction of activity. Won't admit a mistake. May say "I know" when that is not the case	.120	.552	-.034	.326	
37.	Cries or gets frustrated by own inability to master tasks requiring physical coordination appropriate for age (skipping, cutting paper, hopping, etc.)	.129	.411	.211	.341	
38.	Demands attention. Wants to be the center of everything	-.088	.679	.110	.138	
39.*	Is accident/injury prone. Has many mishaps resulting in breakage of objects or requiring first aid	—	—	—	—	
40.	Expresses concern for others in pain or distress. Demonstrates empathy	.580	.272	.090	-.132	
41.	Resists the introduction of speech/oral/auditory activities. Employs delaying tactics more often than with other kinds of school work	(.290	.238	.191	.277)	**
42.*	Daydreams too often. Tunes out events in immediate environment	—	—	—	—	
43.	Lacks appropriate range of emotional responses (anger, fear, joy, sadness). Emotional tone is "flat" and unexpressive	.658	-.043	.086	.260	
44.	Demonstrates a sense of humor or wit (can appreciate funny situations or jokes)	.675	.092	.161	.077	
45.	Generous. Willing to share treats or toys with others	.440	.459	.058	-.058	
46.	Takes disproportionate share of teachers' time with demands for help and attention	.096	.584	.221	.338	
47.	Appears to be impulsive. Acts without thinking	.111	.619	.172	.110	
48.*	Displays unusual habits or mannerisms such as twitches or tics of face or body	—	—	—	—	
49.	Denies own misbehavior. Refuses to admit misdeeds	.079	.606	-.104	.258	
50.	Accepts hearing aid without complaint	(.198	.172	.189	.071)	**
51.*	Gets pleasure from watching self in mirror	—	—	—	—	
52.*	Excessively shy with adults	—	—	—	—	
53.*	Recovers quickly from discipline, disappointment, injury, etc. — resilient in face of upsetting circumstances	—	—	—	—	
54.	Interested in receiving communications from others. Puts effort into understanding their messages	.715	.167	.157	.085	
55.	Forms warm, close attachments to teachers	.672	.196	-.025	.088	
56.*	Copes effectively with separation from parent(s). Does not cling or scream unduly when parent departs	—	—	—	—	
57.*	Perseverates in non-productive activity for long periods of time (e.g., pushes bolt into lock over and over again)	—	—	—	—	
58.	Soils (defecates in) pants	.114	.079	.773	.007	
59.	Feeds self adequately with fork and/or spoon	.299	.118	.484	.043	
60.*	Enjoys play with other children	—	—	—	—	
61.	Willing to take turns (understands concept of turn-taking)	.385	.495	.291	.012	
62.	Communicates toileting needs	.320	.036	.676	.006	
63.	Initiates communication with adults	.692	-.059	.242	.056	
64.*	Sucks thumb and/or finger(s)	—	—	—	—	
65.*	Gentle with animals/pets	—	—	—	—	
66.	Engages in self-abusive behavior (bangs head, hits or bites self)	.261	.225	.410	.143	
67.*	Rebuffs efforts of others to touch, caress or hug	—	—	—	—	
68.*	Interacts well with female adults	—	—	—	—	
69.*	Feels responsible for/is attached to his/her own possessions (toys, etc.)	—	—	—	—	
70.	Curious: wants to explore the environment (machines, switches, etc.)	.506	-.053	.086	.172	
	Inter-item reliability***	.92	.91	.80	.75	

*Items eliminated from the final inventory

**Eliminated from final factor analysis; included as "special item related to deafness" in final inventory.

***Cronbach's alpha

the evaluators.)

- Amuses self. Plays alone with toys, books, household objects.
- Gets pleasure from watching self in mirror.
- Enjoys play with other children.
- Interacts well with female adults.
- Feels responsible for/is attached to own possessions (toys, etc.).

(These items did not differentiate among the children: 90 percent or more received a rating of *TRUE* or *true* on each of the five items.)

- Excessively shy with adults.
- Recovers quickly from discipline, disappointment, injury, etc.—resilient in face of upsetting circumstances.

(No demographic variable discriminated among children on these two items: sex, age, additional handicapping condition, race. Also, teachers participating in the collection of data for assessing test-retest reliability often failed to agree with their own first assessments of students on these items four weeks later.)

After those nine items were eliminated from the pool of 70, the remaining pool of 61 items was subjected to a factor analysis. The procedure used was that of orthogonal (varimax) rotation, with two, three, four, and five factors requested. The "best" factor solution was that which separated the items into four factors or scales; that is, items clustered in groups with the greatest theoretical meaning. The largest number of items could be retained in one of the four scales, if a minimum loading of .400 was used as a criterion. Three items related to deafness are included in the final version of the inventory as special items, even though they did not meet the criterion for inclusion in a formal scale.

Table 13 shows the research inventory, the scales in which items were grouped by means of the factor analysis, and the loading of those scales. Asterisks (*) indicate items excluded from the final inventory on the basis of the factor analysis.

As indicated in Table 13, Scale 1 consists of 18 items that describe sociable, communicative behaviors. The inter-item reliability for this scale (Cronbach's alpha) is .92. Scale 2 consists of 16 items describing primarily impulsive, dominating behaviors. (A high score on this scale reflects the absence of those negative kinds of behaviors.) Inter-item reliability for this scale is .91. Scale 3 contains six items that reflect the achievement of developmental or maturational tasks (such as toilet training). Inter-item reliability for these six items was a marginal .80. Scale 4 contains six items related to anxious, compulsive, or obsessive kinds of behaviors. (Again, a high score reflects the absence of the negative behaviors.) Inter-item reliability of the six items is .75. The three special items related to deafness describe the child's response to amplification equipment and to speech and auditory activities.

Establishment of Preschool Norms

After completion of the work described, mean scale scores were computed for each child for whom inventories had been collected. (Ratings for individual items had previously been reversed where necessary to reflect positive or negative values.) A mean score was recorded for a child only where a certain minimum number of items had been completed by the person doing the evaluation; that minimum was set at approximately 80 percent of the items in each scale. A series of two-way analyses of variance was performed: Scales 1 to 4 plus special items by sex (boys versus girls) and by age (36–47 months, versus 48–59 months, versus 60–71 months). Results of these statistical procedures are shown in Table 14.

Table 14 shows that boys received scores significantly lower than did girls on Scales 1, 2, and 3. Age had a significant effect only on Scale 3, although there is interaction of age with sex. For Scale 4 and the three special items related to deafness, scores did not vary either by sex or by age. On Scale 3, where age is a significant score determinant, both girls and boys at the youngest level score significantly below their older peers, as would be expected on items describing developmental or maturational skills. In order to reflect these trends, as well as the significant age and sex differences, and to simplify the scoring of the inventory, it was decided to present norms for boys and for girls at the three age levels for Scales 1, 2, and 3. Scale 4 and the special items are presented in terms of mean scores for the total group without regard either to age or sex.

Table 14
PreSchool Inventory Scores by Sex and Age:
Scales 1 to 4 and Special Items

Scale 1
Sociable, Communicative Behaviors

Grand Mean: 3.31 (752)

	Age		
	36-47 mos.	48-59 mos.	60 + mos.
	$\bar{X}$ (N)	$\bar{X}$ (N)	$\bar{X}$ (N)
Boys	3.24(65)	3.25(122)	3.27(221)
Girls	3.27(64)	3.41(100)	3.39(180)

main effects:

sex F = 11.07***
age F = 1.38
interaction F = .65

Scale 2
Impulsive, Dominating Behaviors

Grand Mean: 3.11(752)

	Age		
	36-47 mos.	48.-59 mos.	60 + mos.
	$\bar{X}$ (N)	$\bar{X}$ (N)	$\bar{X}$ (N)
Boys	3.06(65)	3.08(122)	3.02(221)
Girls	3.11(64)	3.18(100)	3.20(180)

main effects:

sex F = 11.69***
age F = .35
interaction F = .96

Scale 3
Developmental Lags (Tasks)

Grand Mean: 3.57(752)

	Age		
	36-47 mos.	48-59 mos.	60 + mos.
	$\bar{X}$ (N)	$\bar{X}$ (N)	$\bar{X}$ (N)
Boys	3.18(65)	3.51(122)	3.63(221)
Girls	3.42(64)	3.63(100)	3.70(180)

main effects:

sex F = 11.11***
age F = 31.25***
interaction F = 1.58

Scale 4
Anxious, Compulsive Behaviors

Grand Mean: 3.29 (752)

	Age		
	36-47 mos.	48-59 mos.	60 + mos.
	$\bar{X}$ (N)	$\bar{X}$ (N)	$\bar{X}$ (N)
Boys	3.37(65)	3.35(122)	3.27(221)
Girls	3.25(64)	3.31(100)	3.26(180)

main effects:

sex F = .97
age F = 1.50
interaction F = .73

Special Items Related to Deafness

Grand Mean: 3.39(752)

	Age		
	36-47 mos.	48-59 mos.	60 + mos.
	$\bar{X}$ (N)	$\bar{X}$ (N)	$\bar{X}$ (N)
Boys	3.28(65)	3.37(122)	3.39(221)
Girls	3.42(64)	3.47(100)	3.40(180)

main effects:

sex F = 2.25
age F = .58
interaction F = .84

***$p \leq .001$

RELIABILITY AND VALIDITY OF THE PRESCHOOL INVENTORY

Test-retest reliability refers to the extent of agreement in ratings or scores on the same instrument completed or administered at two different times for the same subject, by the same rater or administrator. We would expect that some degree of difference would reflect the reality of change in a young child's behavior over time, but would also expect that there should be at least general agreement over the short term. Four school programs* were willing to cooperate in collecting a second rating for their students by the same teachers four weeks after the first assessment was completed. Those four schools included the Kendall Demonstration Elementary School, Gallaudet College (23 students); the Central North Carolina School for the Deaf (21 students); the Eastern North Carolina School for the Deaf (72 students); and the Callier Center for Communication Disorders, University of Texas at Dallas (43 students).

A total of 159 students were evaluated by their teachers for the second time four weeks after their first evaluations were completed. Table 15 shows the correlations of scores on each of the five scales at Time 1 and Time 2. When ratings for the 159 children in the four programs were combined, the test-retest reliability (measured by Pearson r) ranged from a high of .90 for Scale 3 to a low of .70 for Scale 4. When programs are analyzed individually, we see that those numbered 2, 3, and 4 have consistently high correlation coefficients for Scales 1, 2, and 3. Program 1 shows consistently lower coefficients.

Inter-rater reliability refers to the extent of the agreement between two different observers of the same child. Again, it is quite possible that a child may behave differently in two different settings, or may respond differently to two adults in the same setting. However, if a set of items describes observable behaviors, there should be some degree of agreement between the evaluations of the two adults. One of the participating schools (Central North Carolina School for the Deaf) was able and willing to provide completed inventories on 21 children from teachers and from teachers' aides, both of whom completed ratings of the children at the same time. Correlations between these two sets of ratings are shown in Table 16. The inter-rater reliability scores range from a very high .95 for Scale 1 to a low of .75 for Scale 4. Data from Tables 15 and 16 indicate that Scales 1, 2, and 3 are more reliable than Scale 4 or the special items related to deafness.

The validity of a measurement instrument refers to the extent to which it relates to global behaviors with meaning in the real world, and summarizes qualities that have shared meaning for parents, teachers, and other professionals concerned with providing optimal services for or interventions with children. The usual method of assessing validity of a newly-developed instrument, such as the SEAI, is to compare scores on the new inventory with scores on a previously developed and widely accepted measurement instrument. That becomes difficult when the reason for developing

Table 15
Correlations Between Teachers' Scale Ratings, Time 1 and Time 2, Four School Programs

	Program				All Programs Combined
	1	2	3	4	
(N)	(23)	(21)	(72)	(43)	(159)
Scale 1	.65	.92	.91	.85	.87
Scale 2	.46	.83	.87	.74	.77
Scale 3	.25	.90	.95	.86	.90
Scale 4	.41	.45	.74	.70	.70
Special Items	.60	.43	.86	.72	.75

Table 16
Correlations Between Ratings of Teachers and Teachers' Aides (N = 21)

	Program 2
Scale 1	.95
Scale 2	.88
Scale 3	.84
Scale 4	.75
Special Items	.84

*The following school programs and teachers participated in this data collection procedure: *Kendall Demonstration Elementary School* (coordinated by Janice Welborn); Heidi Dexheimer, Sara Gillespie, Rachel Harris, Arnetta W. Myrtle, Lynn Sterling. *North Carolina School for the Deaf* (coordinated by Linda McCallister); L. Beasley, Josephine M. Brendle, Carolyn Curtis, S. Louise Harris, Alice W. Smith, Glenda C. Zmyewski, Sarah Young. *Callier Center for Communication Disorders* (coordinated by Frank W. Powell and Diane Garner); Virginia Carver, Lynn Cather, Linda Cox, Debbie English, Susan Fortlage, Pam Hackney, Becky Massey, Will Mazurek, Kaye Mitchell, Kathy Moss. *Eastern N.C. School for the Deaf* (coordinated by Frank R. Bryan); Lynn S. Balderson, Ann Barnes, Martha Beavens, Susan Clingenpeel, Elizabeth Dawson, Diane Driver, Gena Glass, Jackie Harris, Sherrol Jordan, Linda B. Massey, Bonnie Pike, Sandra Simmons, Rebekah Taylor, Susan M. Wells.

Their contributions are acknowledged with gratitude.

the new inventory is the lack of other instruments for deaf children.

It would be useful, however, to compare SEAI scores with scores on the Alpern-Boll Developmental Profile, the Child Behavior Checklist, or other measures that have been used either for research or clinical assessment of deaf children. It is hoped that this will be done in the future. For the present, there is one set of data that can help readers decide on the inventory's usefulness. Table 17 shows the relationships between the five scores from the inventory and global assessments teachers were asked to complete at the time the inventory was collected.

The "general assessment" questions that teachers were asked to answer (on a four-point scale) were as follows: "Do you consider this child to be generally well-adjusted?" Responses to this question (shown in Table 16) had high correlations to scores on Scale 1 (sociable, communicative behaviors— – .69) and Scale 2 (impulsive, dominating behaviors— – .58), but lower correlations with scores on Scales 3 and 4 and the special items. The second general question was, "Do you consider this child to generally mature for the age level?" Responses to this question correlate with Scales 1 and 2 and with Scale 3 (developmental lags) as well: – .62, – .56, – .53. The third general question was: "Do you consider this child to have a high level of self-regard?" Responses to this question correlated most highly with scores on Scale 1 (– .70), less highly with Scale 2 (– .50) and Scale 3 (– .48). None of the three general questions showed a correlation as high as .50 with Scale 4 or the deafness-related items.

Table 17
Correlations Between Teachers' General Assessments of Children and Scores on the Preschool Inventory (Pearson r)

General Assessment:	Scale 1	2	3	4	Special Items
Adjustment	-.69(812)	-.58(810)	-.44(815)	-.42(800)	-.36(789)
Maturity	-.62(812)	-.56(810)	-.53(815)	-.34(800)	-.31(789)
Self-regard	-.70(807)	-.50(804)	-.48(809)	-.37(795)	-.34(784)

(Negative coefficient values reflect positive correlations)

COMPLETING THE SCHOOL-AGE AND PRESCHOOL SOCIAL-EMOTIONAL ASSESSMENT INVENTORIES

Suggestions for Teachers and Other School Personnel

Generally speaking, the instructions on the first page of the inventory should be adequate for orienting school personnel to the assessment process: "Read each item carefully and decide if it describes the behavior that you have observed in this particular child. In deciding how to assess the child, use as your reference all children of the same age, whether or not they have hearing losses. Some statements (those related to hearing aids) are relevant only for children with hearing losses. In responding to those statements, use all deaf or hearing impaired children known to you as your reference, not just those in your present class. Circle the responses that reflect your best judgment of this child, based on at least eight weeks of contact."

The inventory was designed to be used by persons who know hearing impaired students well, as a result of intensive contact and repeated opportunities for observations in a variety of settings within the school: at work and at play, with peers and with adults, alone and in groups, within and outside the classroom. The inventory will only be as reliable (dependable) and valid (meaningful) as the observations of the person who completes it. The inventory should be seen as a way to structure the everyday observations of students and not as a substitute for careful observation. Thus, teachers and parents should have more confidence in assessments that are made after evaluators have known a student for several months than in assessments made after a few weeks. (Evaluators should probably have a period of at least eight weeks to observe students not previously known to them.)

Evaluators who feel that they do not know a particu-

Example:
T t f F ? Happy, cheerful, pleasant, easy-going

Key: T = VERY TRUE. Statement gives a very good description of this student as she or he behaves most of the time.

t = true. Statement describes this student's behavior some of the time.

f = false. Statement is not a good description of this student's behavior.

F = VERY FALSE. This student would never (or almost never) be described in this way.

? = cannot rate or does not apply.

lar student very well are urged to request that a colleague who has had frequent contact with the student complete a second rating. The scores from the two independent assessments can then be compared. If scale scores differ appreciably, the two raters should check the items where there are discrepancies and discuss examples of the student's behavior from their own experiences.

It should be remembered that students often display different kinds of behavior with different adults, and no stigma should be attached either to requesting a second opinion or to reaching different conclusions. However, the person at the school who is responsible for monitoring administration of the SEAI should be on the alert for individuals who consistently seem to assess students either too positively or too negatively. Discussion about the behavioral examples from which those persons are working should help to reduce discrepancies.

It is important to remember that there is nothing sacred about the inventory just because it has been printed after being subjected to a formal development process and statistical treatment. Scale scores that deviate greatly from staff members' general impressions of a student should be rechecked, discussed, and perhaps reassessed.

As will have been noted, each item is to be rated on a four-point scale: VERY TRUE to true to false to VERY FALSE. This response mode was selected because it gave some possibilities for indicating degrees of agreement with the statement, and because the true-false format seemed to fit most of the statements better than alternative tags.*

Those who have a problem fitting their thinking to the TtfF format should remember that those letters translate into numerical scores ranging from the most positive response to the most negative. It will also be noted that T is the most positive assessment for some items and will translate into a score of 4. For other items T is the most negative assessment and will translate into a score of 1. However, the evaluator does not need to be concerned with that difference since the scoring sheets are designed to convert numerical values as appropriate.

The ? can reflect either of two situations. The item, as worded, does not apply to a particular student, or the person doing the assessment has not had an opportunity to observe the student in enough situations related to the item to feel confident about making the judgment. The ? should be used as infrequently as possible, because any scale that does not have at least 80 percent of the items completed cannot be scored.

It is better, however, for a rater to feel a certain degree of confidence about the judgment than to complete the items merely for the sake of getting a scale score. In some cases, an individual may need additional time to observe a particular student, or some other member of the school staff may feel more qualified to complete the assessment of that student. It is important that any comparing of notes about individual students take place only after the assessment has been completed and scored. The most useful scores are those that reflect the judgment of one person using his or her own observations. Discussions with others about specific items can influence the independent opinion of the rater.

*Some alternatives that were considered are Agree/Disagree (AadD) and Usually, Sometimes, Rarely, Never (USRN). Some reviewers of the inventories preferred one or another of the alternative formats. After considering various arguments, the present format was finally adopted and does not seem to have presented problems for teachers who have used the inventories to date.

SCORING THE SCHOOL-AGE INVENTORY

After the evaluator's assessment has been completed and responses circled for each of the 59 school-age SEAI items, the responses should be transferred to the scoring sheet provided with each inventory.* A sample of the School-Age Social-Emotional Assessment Inventory, followed by a sample completed scoring sheet, will be found on the next several pages. Reference to these forms should clarify the scoring procedure.

In the scoring example for Janie Doe, F is circled by the evaluator for item 1. The scoring sheet indicates that F on item 1 receives a score of 1, and that item 1 is part of Scale 1.

Janie Doe's teacher circled the f for item 5. The scoring sheet shows that f on item 5 receives a score of 3, and that item 5 is part of Scale 1. The 3 is circled opposite item 5 and the number 3 is written in the empty box to the right.

This procedure is followed for all 59 items. Then each of the six columns is added (Scales 1, 2, and 3 in column A, items 1 through 30; and Scales 1, 2, and 3 in column B, items 30 through 59). The number of question marks (?) appearing in each column is also tallied. The sum of columns A plus B for each scale is noted, as well as the total number of question marks.

Those final totals are then transferred from the scoring sheet to page 4 of the inventory. For Janie Doe, the total score received on Scale 1 is 51. That number is divided by 21—total of 23 items in Scale 1 minus the two uncompleted (?) items—for a scale score or average of 2.43. Similar calculations yield a scale score or average of 2.10 for Scale 2, and a score of 3.50 for Scale 3. Averages should not be computed if fewer than 18 of the 23 items in Scales 1 and 2 are circled or if fewer than 10 of the 13 items in Scale 3 are completed.

Janie Doe is a 13-year-old girl. Turning to the school-age norms for students ages seven to 15 (Table 18) we see that a score of 2.43 on Scale 1 is between the 10th and 20th percentiles. A score of 2.10 on Scale 2 is

*These individual scoring sheets represent a change from scoring instructions provided with the first edition of the school-age SEAI. The transparent scoring templates are no longer necessary and the scoring method has been simplified.

below the 10th percentile; a score of 3.50 on Scale 3 is slightly below the 70th percentile. Those percentile rankings are marked on the summary profile chart.

We can see that Janie's score for emotional adjustment is above average, compared to the 1231 boys and girls in her age group who participated in the norming procedures. However, her scores for social adjustment and for self image are far below average for girls. At least 80 percent of the norming group received higher scores than hers.

Her teachers might well decide, therefore, to plan ways of helping Janie in the classroom, or might confer with a school psychologist or counselor for additional suggestions.

SCORING THE PRESCHOOL INVENTORY

After the evaluator's assessment of a preschool child has been completed and responses circled for each of the 49 preschool SEAI items, the responses should be transferred to the scoring sheet provided with each inventory.

Samples of a preschool inventory and completed scoring sheet are printed on the following pages. Reference to these sample forms should clarify the scoring procedure.

In the scoring example for Johnny Roe, t is circled by the evaluator for item 1. The scoring sheet indicates that t on item 1 receives a score of 3, and that item 1 is part of Scale 1. Write the score of 3 in the blank space for item 1 under Scale 1.

Johnny Roe's teacher circled the F for item 3. On the scoring sheet, F receives a score of 4, which should be extended to the blank space at the right, in Scale 1. This procedure is followed for all 49 items.

Then each of the five columns is totaled (Scales 1, 2, 3, and 4, and the special items). The number of question marks appearing in each column is tallied separately, as shown. These totals are then transferred to the appropriate boxes on page 4 of the inventory.

For Johnny Roe, the total score received on Scale 1 is 49. That number is divided by 18 (total number of items in Scale 1) for a scale score or average of 2.72. Similar calculations yield averages of 2.13 for Scale 2, 3.67 for Scale 3, 3.00 for Scale 4, and 2.67 for the special items related to deafness. Averages should not be computed if fewer than the specified number of items in each scale are completed.

Johnny Roe is a 49-month-old boy. Turning to Table 20, the preschool norms for his age group (boys, 48–59 months), we note that a score of 2.72 on Scale 1 is between the 10th and 20th percentiles; a score of 2.13 on Scale 2 is below the 10th percentile; and a score of 3.67 on Scale 3 is just below the 60th percentile. Scores on Scale 4 and the special items are not divided by age and sex. On Scale 4, Johnny's score of 3.00 is between the 25th and 50th percentile. His score of 2.67 on the special items is below the 25th percentile. Finally, these five percentile rankings are marked on the summary profile chart on page 4 of the inventory form.

A look at the summary profile for Johnny Roe's scores reveals that his teacher evaluated him as exhibiting behaviors reflecting sociability and communication skills much below those of other boys of his age. The same is true for behaviors that reflect impulsiveness and dominating responses to others. (Johnny scores below the 20th percentile on Scales 1 and 2. This means that at least 80 percent of four-year-old boys were rated more highly by their teachers than was Johnny.) Johnny's scores for Scale 3 (developmental lags) and Scale 4 (anxious, compulsive behaviors) are slightly above and slightly below the median or 50th percentile, so his teachers would not be concerned about these areas. However, he may need special attention to his use of hearing aids or responses to special education efforts related to his hearing loss (reflected in his low scores on the "special items").

Overall, however, it would seem that Johnny's teachers and parents would want to evaluate his social skills very carefully, giving thought to how they can help him improve his relationships with both adults and peers.

USE OF THE SOCIAL-EMOTIONAL ASSESSMENT INVENTORIES: A CAUTIONARY POSTSCRIPT

It is worth noting that these inventories (or any others) are useful only if they are completed thoughtfully after careful observation. Public Law 94-142 mandates the assessment of all handicapped children in areas important to their educational achievement and general optimal development. The law also requires that assessment instruments be standardized on a population similar to that with which they are to be used. However, assessment should never be done for its own sake.

There should be a thoughtful plan for implementing a program to meet the needs of students found to be operating in, for example, the 10th, 20th, or 30th decile, in an effort to improve their self image or their social and emotional adjustment. There also should be sensitivity to the dangers of "labelling" students, to ensure that they will be helped rather than hindered in solving their problems.

One danger inherent in the classification of children's behavior problems is that it encourages a static view of behavior that may be tied to differential rates of development or maturity. The traditional approach to the classification of childhood mental disorders was derived from and is tied to the classification of adult disorders. Thus professionals may be tempted to view the child as a miniature adult, ignoring developmental patterns that reflect maturational lags. That model also may encourage the idea that disturbance in childhood leads inevitably to disturbance in adulthood, although that is not the case (Phillips, Draguns, & Bartlett, 1975).

This is a special danger where deaf students are concerned, since they may suffer developmental lags that are associated with early linguistic and cultural deprivation, but which they may overcome as communication becomes easier for them and they have more positive experiences with other deaf people.

The Social-Emotional Assessment Inventory should be seen as one tool that can be used to flag students who need extra attention in particular areas. The inventory can be useful in communicating with parents who are reluctant to admit that their child needs special attention. It can be helpful in implementing an individualized program so that social and emotional areas are emphasized in the curriculum for the child who needs them.

This kind of approach to practical action can help to implement the spirit as well as the letter of Public Law 94-142.

Meadow-Kendall
Social-Emotional Assessment Inventory
for Deaf and Hearing Impaired Students

By Kathryn P. Meadow
Center for Studies in Education
and Human Development

Kendall Demonstration
Elementary School
Gallaudet College

Date of Rating _____ Date of Birth _____
Month Day Year

Student's Name
or Code Number _____ Sex ___M ___F
(First) (Last)

School _____

Rater's Name _____

Position _____

INSTRUCTIONS:
Read each statement carefully and decide if it describes behavior that you have observed in this particular student.In deciding how to assess the student, use as your reference all students of the same age, regardless of whether or not they have a hearing loss. However, some statements are relevant ONLY for hearing impaired students. For these statements, use all hearing impaired students known to you as your reference, NOT just those in your present class. Circle the response that reflects your best judgement of this student.

EXAMPLE:
T t (f) F ? 23. Happy, cheerful, pleasant, easygoing

KEY:
T = VERY TRUE. Statement gives a very good description of this student as she or he behaves most of the time.
t = true. Statement describes this student's behavior some of the time.
f = false. Statement is not a good description of this student's behavior.
F = VERY FALSE. This student would never (or almost never) be described in this way.
? = CANNOT RATE or DOES NOT APPLY

The SEAI Instruction Manual and additional forms may be obtained from:
Outreach Pre-College Programs
Box 114, Gallaudet College
Washington, D.C. 20002

Copyright 1983 Pre-College Programs, Gallaudet College

T = VERY TRUE t = true f = false F = VERY FALSE ? = can't rate

T t f F ? 1. Obeys the rules; follows instructions or requests from adults in authority.

T t f F ? 2. Kind and considerate.

T t f F ? 3. Relates well to peers and is accepted by them.

T t f F ? 4. Distinguishes between fact and fiction, real and imaginary events and/or people (understands that "Superman" does not really exist).

T t f F ? 5. Aggressive. Behavior may include fighting, scratching, biting other students and/or kicking or hitting animals.

T t f F ? 6. Demonstrates negative feelings about physical size and/or strength.

T t f F ? 7. Takes pride in physical appearance/ personal attractiveness: feels at least moderately pretty or handsome.

T t f F ? 8. Engages in behavior considered by most teachers and students to be bizarre or strange (talking or signing to self, rocking, staring at lights for long periods, twirling).

T t f F ? 9. Has generally acceptable emotional responses. Rages (tantrums) or violent outbursts occur only after extreme provocation if at all.

T t f F ? 10. Has many fears. Overly and unrealistically concerned with danger, storms, injury, death.

T t f F ? 11. Accepts some delay of gratification. Does not expect instant satisfaction of every need, whim or desire.

T t f F ? 12. Isolated. Has few or no friends. May be considered "withdrawn."

T t f F ? 13. Lacks competence with tools, utensils or equipment even though there is no apparent physical basis for lack of skill.

T t f F ? 14. Teases or annoys or pesters other students.

T t f F ? 15. Shows initiative in completion of assignments; motivated to finish work.

T t f F ? 16. Tries to communicate with others (both deaf and hearing) by any means necessary: signs, speech writing, pantomime.

T t f F ? 17. Takes responsibility for fair share of tasks; helps to clean up after a project is finished.

T t f F ? 18. Insists on repetition of usual routines. Changes in schedules, habits, route arrangements elicit extreme negative responses.

T t f F ? 19. Self-reliant. Not overly dependent on others for help.

T t f F ? 20. Performs cooperatively in group of peers. Contributes to cohesion rather than to conflict.

T t f F ? 21. Overly concerned with cleanliness. May wash hands constantly or be unable to tolerate specks of dust or dirt.

T t f F ? 22. Shows great concern or preoccupation with minute details (may insist on perfection in writing or drawing).

T t f F ? 23. Happy, cheerful, pleasant, easy-going.

T t f F ? 24. Gives up quickly. Expects to fail.

T t f F ? 25. Complains of physical ailments that have no apparent medical basis (headaches, stomachaches, etc.).

T t f F ? 26. Identifies with (shows excited recognition of) a stranger or visitor who wears a hearing aid.

T t f F ? 27. Engages in destructive behavior (breaking objects, defacing walls or furniture, scattering things in disarray).

T t f F ? 28. Relates well to adults (both men and women).

T t f F ? 29. Trustworthy, dependable, reliable.

T t f F ? 30. Anxious: nervous, worries about many commonplace events.

T t f F ? 31. Demonstrates negative attitudes toward sign language (refuses to sign, pretends not to understand others' signing).

T t f F ? 32. Misbehavior not deterred by restrictions or by threat of punishment.

T t f F ? 33. Creative. Shows imagination in school work in leisure/ play activities.

T t f F ? 34. Lethargic. Lacks energy. Always tired.

T t f F ? 35. Fails to accept criticism, especially if it is expressed as discipline or restriction.

T t f F ? 36. Demonstrates negative feelings about own motor skills, dexterity, or visible handicaps.

T t f F ? 37. Demands attention. Must be center of everything. May insist on being first in line, or leader, or captain.

T t f F ? 38. Shows excited, positive responses to stranger who is using signs.

T t f F ? 39. Has many accidents or mishaps resulting in breakage of objects or injuries requiring first aid.

T t f F ? 40. Seems to understand the feelings of others; demonstrates empathy.

T t f F ? 41. Tries to understand the communication of others by any means offered: listening, lipreading, signing, writing, gestures.

T t f F ? 42. Curious. Eager to learn new things. Likes new experiences.

T t f F ? 43. Responds poorly to losing in games or failing to achieve in class.

T t f F ? 44. Daydreams. Tunes out events in immediate environment.

T t f F ? 45. Accepts differences in other people; doesn't tease or exclude peers on basis of racial differences or physical handicaps.

T t f F ? 46. Has habits, mannerisms or traits considered to be rude or socially unacceptable (e.g., picks nose, makes obscene/ sexual references).

T t f F ? 47. Participates in classroom or group activities; volunteers answers, offers opinions in discussions.

T t f F ? 48. Doesn't try to copy classmates' work nor take things belonging to others.

T t f F ? 49. Other students look to this student as a leader.

T t f F ? 50. Demonstrates a sense of humor or wit (can appreciate funny situations or jokes at own expense).

T t f F ? 51. Generous. Shares with others.

T t f F ? 52. Demands attention and help constantly. Takes disproportionate share of teacher's time.

T t f F ? 53. Participates well in organized play or games (takes role of leader or follower; plays to completion; follows rules).

T t f F ? 54. Is willing to interact with hearing people: does not refuse to interact with peers or adults who have normal hearing.

T t f F ? 55. Acts without thinking. Impulsive. Doesn't consider or doesn't care about consequences.

T t f F ? 56. Demonstrates acceptance/pride in own social group membership (racial, ethnic, linguistic, religious identity).

T t f F ? 57. Avoids communicating through speech. Seems embarrassed to use voice.

T t f F ? 58. Displays twitches, mannerisms, tics of face or body.

T t f F ? 59. Denies own misbehavior; may also blame others for own misdeeds.

MEADOW-KENDALL SCHOOL-AGE INVENTORY
SCORING SHEET

Student's Name or Code No. Janie Doe

Date Completed 2/83

Be sure to consult the SEAI Manual for scoring instructions.

Item No.	Evaluator's Response					Scale No.	(Column A) Score		
	T	t	f	F	?		1	2	3
1.	4	3	2	(1)	?	1	1		
2.	4	3	(2)	1	?	1	2		
3.	4	3	2	(1)	?	2		1	
4.	4	3	2	(1)	?	2		1	
5.	1	2	(3)	4	?	1	3		
6.	1	2	(3)	4	?	3			3
7.	4	3	(2)	1	?	2		2	
8.	1	2	(3)	4	?	3			3
9.	(4)	3	2	1	?	1	4		
10.	1	(2)	3	4	?	3			2
11.	4	(3)	2	1	?	1	3		
12.	(1)	2	3	4	?	2		1	
13.	1	2	3	(4)	?	3			4
14.	1	(2)	3	4	?	1	2		
15.	4	(3)	2	1	?	2		3	
16.	4	3	(2)	1	?	2		2	
17.	4	3	2	(1)	?	1	1		
18.	1	2	3	(4)	?	3			4
19.	4	(3)	2	1	?	2		3	
20.	4	3	(2)	1	?	1	2		
21.	1	2	3	(4)	?	3			4
22.	1	2	(3)	4	?	3			3
23.	4	(3)	2	1	?	1	3		
24.	1	2	3	(4)	?	2		4	
25.	1	2	3	(4)	?	3			4
26.	4	3	2	1	(?)	2		?	
27.	1	2	3	(4)	?	1	4		
28.	4	3	2	1	(?)	2		?	
29.	4	(3)	2	1	?	1	3		
30.	1	2	3	4	(?)	3			?
						Column A Totals	28	17	27
						? Totals	0	2	1

Item No.	Evaluator's Response					Scale No.	(Column B) Score		
	T	t	f	F	?		1	2	3
31.	1	2	3	(4)	?	3			4
32.	1	(2)	3	4	?	1	2		
33.	4	3	2	(1)	?	2		1	
34.	1	(2)	3	4	?	2		2	
35.	(1)	2	3	4	?	1	1		
36.	1	2	(3)	4	?	3			3
37.	1	(2)	3	4	?	1	2		
38.	4	3	(2)	1	?	2		2	
39.	1	2	3	(4)	?	3			4
40.	4	(3)	2	1	?	1	3		
41.	4	3	2	(1)	?	2		1	
42.	4	3	(2)	1	?	2		2	
43.	1	2	3	(4)	?	1	4		
44.	1	2	(3)	4	?	2		3	
45.	4	(3)	2	1	?	1	3		
46.	1	(2)	3	4	?	1	2		
47.	4	(3)	2	1	?	2		3	
48.	4	3	2	(1)	?	1	1		
49.	4	3	2	1	(?)	2		?	
50.	4	3	(2)	1	?	2		2	
51.	4	3	2	1	(?)	1	?		
52.	1	2	3	(4)	?	1	4		
53.	4	3	2	(1)	?	2		1	
54.	4	(3)	2	1	?	2		3	
55.	1	2	3	4	(?)	1	?		
56.	4	3	(2)	1	?	2		2	
57.	1	2	(3)	4	?	2		3	
58.	1	2	3	(4)	?	3			4
59.	(1)	2	3	4	?	1	1		
						Column B Totals	23	25	15
						Add Column A Totals	28	17	27
							51	42	42
						? Totals (A&B)	2	3	1

Transfer these figures to "Score and Summary Profile," page 4 of Inventory Form.

Score Summary and Profile
School-Age Inventory

Student: Janie Doe

Date Completed: 2/83

SCALE 1: Social Adjustment

Do not compute if fewer than 18 items are completed.

Total Score from score sheet: 51

a. Number of items, Scale 1: 23
b. Number of ? answers: 2
c. Subtract b. from a.: 21

SCALE SCORE: Divide Total Score by answer on line c.: 2.43

SCALE 2: Self Image

Do not compute if fewer than 18 items are completed.

Total Score from score sheet: 42

a. Number of items, Scale 2: 23
b. Number of ? answers: 3
c. Subtract b. from a.: 20

SCALE SCORE: Divide Total Score by answer on line c.: 2.10

SCALE 3: Emotional Adjustment

Do not compute if fewer than 10 items are completed.

Total Score from score sheet: 42

a. Number of items, Scale 3: 13
b. Number of ? answers: 1
c. Subtract b. from a.: 12

SCALE SCORE: Divide Total Score by answer on line c.: 3.50

Kendall Demonstration Elementary School

Gallaudet College

Kendall Green
Washington, D.C. 20002

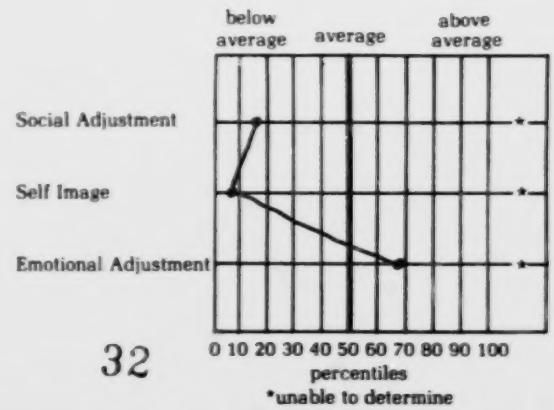


Table 18
Norms for Ages 7-15, School-Age Inventory

Percentile	Scale 1 Social Adjustment		Scale 2 Self Image		Scale 3 Emotional Adjustment
	Girls	Boys	Girls	Boys	Both Girls & Boys
90	3.70	3.52	3.75	3.65	3.92
80	3.48	3.26	3.55	3.45	3.69
70	3.30	3.09	3.36	3.29	3.54
60	3.13	3.00	3.23	3.14	3.33
50	3.04	2.90	3.10	3.00	3.18
40	2.95	2.78	3.00	2.90	3.08
30	2.78	2.61	2.86	2.81	3.00
20	2.61	2.39	2.73	2.68	2.91
10	2.35	2.21	2.48	2.48	2.69
(N)	*(540)*	*(692)*	*(477)*	*(605)*	*(1231)*

Table 19
Norms for Ages 16-21, School-Age Inventory

Percentile	Scale 1 Social Adjustment		Scale 2 Self Image		Scale 3 Emotional Adjustment
	Girls	Boys	Girls	Boys	Both Girls & Boys
90	3.74	3.70	3.68	3.64	3.92
80	3.61	3.41	3.50	3.37	3.75
70	3.35	3.23	3.25	3.18	3.58
60	3.22	3.09	3.10	3.05	3.45
50	3.09	3.00	2.95	2.95	3.25
40	3.00	2.87	2.90	2.86	3.15
30	2.91	2.77	2.80	2.76	3.00
20	2.83	2.52	2.73	2.60	2.92
10	2.57	2.18	2.55	2.37	2.77
(N)	*(395)*	*(444)*	*(317)*	*(358)*	*(811)*

Meadow-Kendall
Social-Emotional Assessment Inventory
for Deaf and Hearing Impaired Students

By Kathryn P. Meadow
Center for Studies in Education
and Human Development

Kendall Demonstration
Elementary School
Gallaudet College

Date of Rating _____ Date of Birth _____
Month Day Year

Student's Name
or Code Number _____ Sex ___ M ___ F
(First) (Last)

School _____

Rater's Name _____

Position _____

INSTRUCTIONS:
Read each statement carefully and decide if it describes behavior that you have observed in this particular student.In deciding how to assess the student, use as your reference all students of the same age, regardless of whether or not they have a hearing loss. However, some statements are relevant ONLY for hearing impaired students. For these statements, use all hearing impaired students known to you as your reference, NOT just those in your present class. Circle the response that reflects your best judgement of this student.

EXAMPLE:
T t (f) F ? 11. Happy, cheerful, pleasant, easygoing

KEY:
T = VERY TRUE. Statement gives a very good description of this student as she or he behaves most of the time.
t = true. Statement describes this student's behavior some of the time.
f = false. Statement is not a good description of this student's behavior.
F = VERY FALSE. This student would never (or almost never) be described in this way.
? = CANNOT RATE or DOES NOT APPLY

The SEAI Instruction Manual and additional forms may be obtained from:
Outreach Pre-College Programs
Box 114, Gallaudet College
Washington, D.C. 20002

Copyright 1983 Pre-College Programs, Gallaudet College

T = VERY TRUE t = true f = false F = VERY FALSE ? = can't rate

T t f F ? 1. Shows interest/pride in products of school activities (drawings, projects, block structures, etc.).

T t f F ? 2. Forms warm, close attachments to (friendships with) peers.

T t f F ? 3. Exhibits behaviors considered by most teachers and students to be bizarre or strange (e.g. rocking, staring at lights for long periods, twirling, talking to self in "own world").

T t f F ? 4. Very fearful. Overly and unrealistically concerned with danger, storms, dark rooms, injury, death, health, parents' welfare.

T t f F ? 5. Generally unsuccessful in efforts to get approval or acknowledgement from peers.

T t f F ? 6. Has age-appropriate attention span.

T t f F ? 7. Isolated. Has no friends. Withdrawn.

T t f F ? 8. Ritualistic. Insists on repetition of usual routines. Changes in routine elicit extreme, negative responses.

T t f F ? 9. Avoids eye contact.

T t f F ? 10. Communicates with children and/or adults by any means at her/his disposal: gesture, sign, vocalization, pantomime, speech, drawing.

T t f F ? 11. Happy, cheerful, pleasant.

T t f F ? 12. Overly concerned with cleanliness. May wash hands or toys constantly or be unable to tolerate specks of dust or dirt.

T t f F ? 13. Demonstrates negative attitudes toward communication. May refuse to sign or to speak, pretends not to understand, closes eyes.

T t f F ? 14. Creative. Shows imagination in painting, blocks, dramatic play, etc.

T t f F ? 15. Expresses concern for others in pain or distress. Demonstrates empathy.

T t f F ? 16. Shows great concern or preoccupation with insignificant details (may insist on perfection in writing, drawing, block-play, puzzles).

T t f F ? 17. Lacks appropriate range of emotional responses (anger, fear, joy, sadness). Emotional tone "flat" and unexpressive.

T t f F ? 18. Demonstrates a sense of humor or wit (can appreciate funny situations or jokes).

T t f F ? 19. Interested in receiving communications from others. Puts effort into receiving their messages.

T t f F ? 20. Uses aches, pains, minor injuries to get attention and/or to avoid chores.

T t f F ? 21. Forms warm, close attachments to teachers.

T t f F ? 22. Initiates communication with adults.

T t f F ? 23. Curious: wants to explore the environment (machines, switches, etc.).

T t f F ? 24. Basically an anxious child. Nervous, worries about many things.

T t f F ? 25. Follows instructions or requests from adults.

T t f F ? 26. Overly aggressive. Behaviors may include fighting, scratching, biting.

T t f F ? 27. Wets pants.

T t f F ? 28. Has generally acceptable emotional responses. Rages, tantrums, or violent outbursts occur only after extreme provocation, if at all.

T t f F ? 29. Accepts delay of gratification. Does not expect instant satisfaction of every need, whim, or desire.

T t f F ? 30. Awkward or clumsy with tools, equipment, writing/drawing materials.

T t f F ? 31. Hides, loses, forgets or abuses amplification equipment.

T t f F ? 32. Teases or annoys or pesters other children.

T t f F ? 33. Engages in destructive behavior (breaking objects, defacing walls).

T t f F ? 34. Soils (defecates in) pants.

T t f F ? 35. Scolding or punishment does not prevent or stop negative behaviors.

T t f F ? 36. Persists in silly, clowning behaviors that annoy other children.

T t f F ? 37. Feeds self adequately with fork and/or spoon.

T t f F ? 38. Resists speech/oral/auditory activities. Employs delaying tactics more often than with other kinds of school work.

T t f F ? 39. Unable to accept criticism, especially if expressed as discipline or restriction of activity. Won't admit a mistake. May say "I know" when that is not the case.

T t f F ? 40. Cries or gets frustrated by own inability to master tasks requiring physical coordination appropriate for age (skipping, cutting paper, hopping, etc.).

T t f F ? 41. Communicates toileting needs.

T t f F ? 42. Demands attention. Wants to be the center of everything.

T t f F ? 43. Generous. Willing to share treats or toys with others.

T t f F ? 44. Engages in self-abusive behavior (bangs head, hits or bites self).

T t f F ? 45. Takes disproportionate share of teachers' time with demands for help and attention.

T t f F ? 46. Appears to be impulsive. Acts without thinking.

T t f F ? 47. Accepts hearing aid without complaint.

T t f F ? 48. Denies own misbehavior. Refuses to admit misdeeds.

T t f F ? 49. Willing to take turns. Understands concept of turn-taking.

MEADOW-KENDALL PRESCHOOL INVENTORY
SCORING SHEET

Student's Name or Code No. Johnny Doe

Date Completed 2/83

Be sure to consult the SEAI Manual for scoring instructions.

Item No.	Evaluator's Response					Scale No.	(Column A) Score					
	T	t	f	F	?		1			4		
1.	4	(3)	2	1	?	1	3					
2.	4	3	(2)	1	?	1	2					
3.	1	2	3	(4)	?	1	4					
4.	1	2	(3)	4	?	4				3		
5.	1	2	3	(4)	?	1	4					
6.	4	(3)	2	1	?	1	3					
7.	1	2	(3)	4	?	1	3					
8.	1	2	3	(4)	?	4				4		
9.	1	2	3	(4)	?	1	4					
10.	4	3	(2)	1	?	1	2					
11.	4	3	(2)	1	?	1	2					
12.	1	2	(3)	4	?	4				3		
13.	(1)	2	3	4	?	1	1					
14.	4	3	(2)	1	?	1	2					
15.	4	(3)	2	1	?	1	3					
16.	1	(2)	3	4	?	4				2		
17.	1	2	3	(4)	?	1	4					
18.	4	3	(2)	1	?	1	2					
19.	4	(3)	2	1	?	1	3					
20.	1	2	(3)	4	?	4				4		
21.	4	3	(2)	1	?	1	2					
22.	4	3	(2)	1	?	1	2					
23.	4	(3)	2	1	?	1	3					
24.	1	2	(3)	4	?	4				3		
						Column A Totals	49			18		
						? Totals	0			0		

Item No.	Evaluator's Response					Scale No.	(Column B) Score				
	T	t	f	F	?		2	3		S.I.	
25.	4	(3)	2	1	?	2	3				
26.	1	(2)	3	4	?	2	2				
27.	1	2	(3)	4	?	3		3			
28.	4	(3)	2	1	?	2	3				
29.	4	3	(2)	1	?	2	2				
30.	1	2	3	(4)	?	3		4			
31.	1	2	(3)	4	?	S.I.				3	
32.	1	(2)	3	4	?	2	2				
33.	1	2	(3)	4	?	2	3				
34.	1	2	3	(4)	?	3		4			
35.	1	(2)	3	4	?	2	2				
36.	(1)	2	3	4	?	2	1				
37.	(4)	3	2	1	?	3		4			
38.	1	(2)	3	4	?	S.I.				2	
39.	1	2	(3)	4	?	2	3				
40.	(1)	2	3	4	?	2	1				
41.	4	(3)	2	1	?	3		3			
42.	1	(2)	3	4	?	2	2				
43.	4	(3)	2	1	?	2	3				
44.	1	2	3	(4)	?	3		4			
45.	1	2	(3)	4	?	2	3				
46.	(1)	2	3	4	?	2	1				
47.	4	(3)	2	1	?	S.I.				3	
48.	1	(2)	3	4	?	2	2				
49.	4	3	2	1	(?)	2	?				
						Column B Totals	33	22		8	
						? Totals (A + B)	1	0		0	

Transfer these figures to "Score and Summary Profile," page 4 of Inventory Form.

Score Summary and Profile
Preschool Inventory

Student: Johnny-Joe

Date Completed: 2/83

SCALE 1: Sociable, Communicative Behaviors

Do not compute if fewer than 14 items are completed.

Total Score from score sheet: 49
a. Number of Items, Scale 1 = 18
b. Number of ? answers: 0
c. Subtract b from a: 18
SCALE SCORE: Divide Total Score by answer on line c.: 2.72

SCALE 2: Impulsive dominating behaviors

Do not compute if fewer than 13 items are completed.

Total Score from score sheet: 32
a. Number of items, Scale 2 = 16
b. Number of ? answers: 1
c. Subtract b from a: 15
SCALE SCORE: Divide Total Score by answer on line c.: 2.13

SCALE 3: Developmental Lags

Do not compute if fewer than four items are completed.

Total Score from score sheet: 22
a. Number of items, Scale 3 = 6
b. Number of ? answers: 0
c. Subtract b from a: 6
SCALE SCORE: Divide Total Score by answer on line c.: 3.67

SCALE 4: Anxious, compulsive behaviors

Do not compute if fewer than four items are completed.

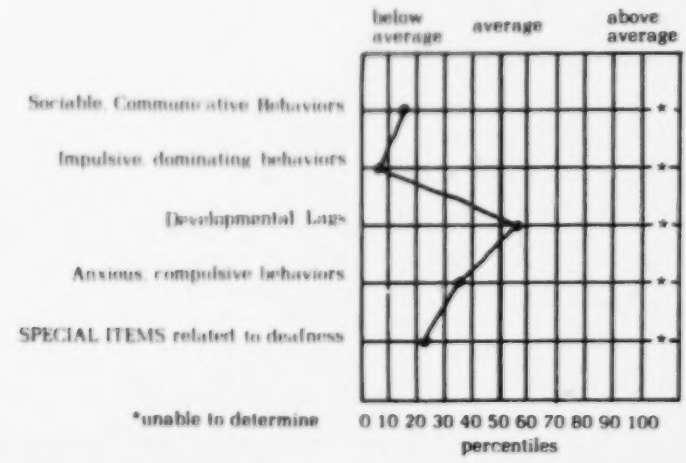
Total Score from score sheet: 18
a. Number of items, Scale 4 = 6
b. Number of ? answers: 0
c. Subtract b from a: 6
SCALE SCORE: Divide Total Score by answer on line c.: 3.00

SPECIAL ITEMS related to deafness

Do not compute if fewer than two items are completed.

Total Score from score sheet: 8
a. Number of Special Items: 3
b. Number of ? answers: 0
c. Subtract b from a: 3
SCALE SCORE: Divide Total Score by answer on line c.: 2.67

SUMMARY PROFILE



Kendall Demonstration Elementary School

Gallaudet College

Kendall Green
Washington, D.C. 20002

Table 20
Norms for Preschool Deaf and Hearing Impaired Children

Scale 1 - Sociable, Communicative Behaviors
Scale 2 - Impulsive, Dominating Behaviors
Scale 3 - Developmental Lags
Scale 4 - Anxious, Compulsive Behaviors

GIRLS

Percentile	Ages 36-47 months			Ages 48-59 months			Ages 60-83 months		
	Scale 1	Scale 2	Scale 3	Scale 1	Scale 2	Scale 3	Scale 1	Scale 2	Scale 3
90	3.82	3.72	3.91	3.85	3.73	3.96	3.86	3.84	3.98
80	3.63	3.53	3.83	3.69	3.60	3.92	3.76	3.63	3.93
70	3.45	3.46	3.81	3.63	3.46	3.88	3.66	3.48	3.88
60	3.34	3.24	3.64	3.53	3.31	3.84	3.59	3.36	3.83
50	3.31	3.08	3.55	3.45	3.18	3.80	3.46	3.15	3.82
40	3.17	2.95	3.35	3.35	3.09	3.57	3.33	3.05	3.80
30	3.06	2.89	3.11	3.21	2.98	3.43	3.21	2.93	3.62
20	2.93	2.65	2.81	3.07	2.83	3.15	3.05	2.77	3.37
10	2.53	2.41	2.51	2.81	2.41	2.95	2.72	2.46	2.99
(N)	(72)	(73)	(74)	(107)	(107)	(108)	(188)	(189)	(188)

BOYS

Percentile	Ages 36-47 months			Ages 48-59 months			Ages 60-83 months		
	Scale 1	Scale 2	Scale 3	Scale 1	Scale 2	Scale 3	Scale 1	Scale 2	Scale 3
90	3.80	3.59	3.89	3.81	3.78	3.92	3.83	3.76	3.95
80	3.66	3.47	3.82	3.70	3.55	3.84	3.72	3.48	3.89
70	3.47	3.30	3.49	3.54	3.30	3.77	3.61	3.31	3.83
60	3.26	3.17	3.31	3.43	3.22	3.69	3.48	3.17	3.81
50	3.14	3.07	3.15	3.30	3.07	3.50	3.27	3.04	3.80
40	3.06	2.90	3.00	3.21	2.91	3.42	3.14	2.88	3.57
30	2.97	2.74	2.90	2.99	2.80	3.21	3.00	2.74	3.44
20	2.77	2.53	2.50	2.84	2.59	3.01	2.83	2.50	3.23
10	2.30	2.28	1.88	2.49	2.26	2.74	2.55	2.22	2.87
(N)	(75)	(72)	(75)	(126)	(126)	(127)	(228)	(227)	(227)

Boys and Girls, Ages 36 to 83 months

Percentile	Scale 4	Special Deafness Items
75	3.64	3.73
50	3.35	3.35
25	2.83	2.83
(N)	(831)	(822)

REFERENCES

Achenbach, T. M. & Edelbrock, C. S. *Behavioral Problems and Competencies Reported by Parents of Normal and Disturbed Children Aged Four through Sixteen.* Monograph of the Society for Research in Child Development, Serial No. 188, 1981, 46, No. 1.

Berlin, I. N. Preventive aspects of mental health consultation to schools. *Mental Hygiene*, 1967, 51, 34–40.

Bower, D. M. A process for early identification of emotionally disturbed children. *Bulletin of the California State Department of Education*, 1958, 27.

Eyberg, S. M. & Ross, A. W. Assessment of child behavior problems: The validation of a new inventory. *Journal of Clinical Child Psychology*, 1978, 7, 113–116.

Federal Register. Education of handicapped children, Implementation of Part B of the Education of the Handicapped Act, Part II. U.S. Department of Health, Education, and Welfare, Office of Education, August 23, 1977.

Gesten, E. L. A Health Resources Inventory: The development of a measure of personal and social competence of primary grade children. *Journal of Consulting and Clinical Psychology*, 1976, 44, 775–786.

Greenberg, M. T. Personal communication, based on: *The PATHS Project: Measure Validation.* Technical Report No. 1983-1. University of Washington, 1983.

Goulder, T. J. & Trybus, R. J. *The classroom behavior of emotionally disturbed children.* Series R, Number 3, Washington, DC: Office of Demographic Studies, Gallaudet College, 1977.

Levine, E. S. *Youth in a Soundless World: A Search for Personality.* Washington Square, NY: New York University Press, 1956.

Levine, E. S. *The Ecology of Early Deafness.* NY: Columbia University Press, 1981.

Maes, W. R. The identification of emotionally disturbed children. *Exceptional Children*, 1966, 32, 607–613.

Meadow, K. P. *The Effect of Early Manual Communication and Family Climate on the Deaf Child's Development.* Unpublished doctoral dissertation, University of California, Berkeley, 1967.

Meadow, K. P. Self-image, family climate, and deafness. *Social Forces*, 1969, 47, 428–438.

Meadow, K. P. The development of deaf children. In E. M. Hetherington, J. W. Hagen, R. Kron, & A. H. Stein (Eds.), *Review of Child Development Research* (Vol. 5). Chicago: University of Chicago Press, 1975.

Meadow, K. P. Personality and social development of deaf persons. In B. Bolton (Ed.), *Psychology of Deafness for Rehabilitation Counselors.* Baltimore: University Park Press, 1976.

Meadow, K. P. *Deafness and Child Development.* Berkeley: University of California Press, 1980.

Meadow, K. P. *Sociometric Status and Adjustment in a Class of Deaf Children*, unpublished manuscript, 1981.

Meadow, K. P. & Schlesinger, H. S. *Studies of Family Interaction, Language Acquisition, and Deafness.* San Francisco: University of California, 1976. (Final report to Office of Maternal and Child Health, Bureau of Community Health Services.)

Meadow, K. P. & Trybus, R. J. Behavioral and emotional problems of deaf children: an overview. In L. J. Bradford & W. G. Hardy (Eds.), *Hearing and Hearing Impairment.* New York: Grune and Stratton, 1979.

Meadow, K. P. & Larabee, G. The feeling wheel: A sharing activity. *Teaching Exceptional Children*, 1982, 15, 18–21.

Meadow, K.P. & Dyssegaard, B. Teachers' ratings of deaf children: An American-Danish comparison. *American Annals of the Deaf* ,in press.

Miller, L. School Behavior Check List. *Journal of Consulting and Clinical Psychology*, 1972, 38, 134–144.

Mindel, E. D. & Vernon, M. *They Grow in Silence: The Deaf Child and His Family.* Silver Spring, MD: National Association of the Deaf, 1971.

Phillips, L., Draguns, T. G., & Bartlett, D. P. Classification of behavior disorders. In N. Hobbs (Ed.), *Issues in the Classification of Children* (Vol. 1). San Francisco: Jossey-Bass, 1975.

Rainer, J. D., Altshuler, K. Z., & Kallmann, F. J. (Eds.). *Family and Mental Health Problems in a Deaf Population.* (Second Edition). Springfield, IL: C. C. Thomas, 1969.

Robinson, E. A., Eyberg, S. M., & Ross, A. W. The standardization of an inventory of child conduct problem behaviors. *Journal of Clinical Child Psychology*, 1980, 9, 22–28.

Schlesinger, H. S. & Meadow, K. P. *Sound and sign: Childhood Deafness and Mental Health.* Berkeley: University of California Press, 1972.

State of California. *Mental Health Survey of Los Angeles County.* Sacramento: Department of Mental Hygiene, 1960.

Walker, H. M. *Walker Problem Behavior Identification Checklist:* 1976 Revision. Los Angeles: Western Psychological Services, 1976.

Zieziula, F. R. (Ed.). *Assessment of Hearing-Impaired People: A Guide for Selecting Psychological, Educational, and Vocational Tests.* Washington, DC: Gallaudet College Press, 1982.